

## Crackers

Consider the following relationship between a state, a change of state, and the causation of a change of state.

### STATE

X was in a state of not being whole, being partially fractured though without the parts completely separate or without the whole completely destroyed,  
-- where X is something, an artefact or also a natural object, of brittle consistency, hard but breakable, such as vases or window panes made of glass, plates made of china, earthenware, urns or tablets made of clay, art objects made from bone or also bones inside live bodies, walls made from dried cow-dung, eggs, etc.

### CHANGE OF STATE

X spontaneously, or at any rate without an animate agent acknowledged as causally involved, changed from a state of being whole to a state of not being whole, being partially fractured though without the parts completely separate or without the whole completely destroyed.

### CAUSATION

An animate agent caused a change of state of A from being whole to not being whole, being partially fractured though without the parts completely separate or without the whole completely destroyed.

To exemplify this triad from English.

### STATE

*The vase had a crack.*

(transitive verb of possession,  
with [deverbal??] noun as object)

*The vase was cracked.*

(existential copula,  
stative-resultative participle of [intransitive,  
denominal??] verb)

### CHANGE OF STATE

*The vase cracked.*

(same verb as for causation, used intransitively)

### CAUSATION

*Father cracked the vase.*

(same verb as for change of state, used transitively)

And here's closely related German.

### STATE

*Die Vase hatte einen Sprung.*

(transitive verb of possession,  
with deverbal noun as object)

*Die Vase war gesprungen.*

(existential copula,  
stative-resultative participle of [intransitive] verb)

## CHANGE OF STATE

*Die Vase sprang.*

(intransitive verb, a verb of movement, literally designating a sudden spring from the ground) Probably not possible with all brittle objects, preferably perhaps only artefacts:

\**Das Eis sprang.* \**Der Knochen sprang.*

‘The ice cracked. The bone cracked.’

*Die Vase bekam einen Sprung.*

(inchoative verb, lit. ‘to get’, with deverbal noun as object)

OK *Das Eis/Der Knochen bekam einen Sprung.*

‘The ice/the bone got a crack.’

## CAUSATION

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Remarkably, though a native speaker of long standing, I find no way of expressing this straightforward state of affairs in German, other than in rather roundabout ways (along the lines of ‘Father was careless and did something to the vase that resulted in its having a crack’, ‘Father brought it about that the vase got a crack’, ‘The vase got a crack owing to father’s clumsiness’, or such). The intransitive-inceptive (motion-based) verb *springen* itself cannot be used transitively-causatively (i); the old morphological causative, *sprengen*, is inappropriate because it now means ‘cause to burst with a loud noise, explode’ (the prefixal derivative *zer-springen*, with *zer-* a completive-annihilative prefix, likewise is only intransitive and means ‘to go to pieces’; it does have a transitive-causative counterpart, *zer-sprengen*, but that verb means ‘break up completely’); infinitival periphrastic constructions with causative verbs such as *lassen* ‘let’ or *machen* ‘make’ don’t work either (ii); combining the denominal resultative noun *Sprung* (and unlike in the case of English *crack* it is clear that this ablauting noun is derived from the verb rather than the other way round) with some general verb of affecting such as *beibringen* or *zufügen* ‘to inflict’ sounds equally infelicitous (iii).

(i) \**Vater sprang die Vase.*

(ii) \**Vater ließ/machte die Vase springen.*

(iii) \**Vater brachte der Vase einen Sprung bei.* \*... *fügte der Vase einen Sprung zu.*

Using the standard verbs of causation *verursachen* ‘to cause’ or *bewirken* ‘to effect’ with the nominalisation *Sprung* as the direct (effected) object and with the affected object as a prepositional phrase with some locative preposition would seem to be the only half-way reasonable option (iv):

(iv) ?*Vater verursachte/bewirkte einen Sprung in der Vase.*

Again, apart from sounding rather stilted, this does not seem entirely felicitous with human agents as subject, regardless of whether the idea is that they acted intentionally or inadvertently brought about a (less-than-radical, non-annihilative) change of state. Sentences like (iv) improve markedly when causal force is attributed to internal or external circumstances -- faults in the vase’s material, pressure brought to bear on the

vase, objects hitting it for whatever reason, father's clumsiness in handling it -- rather than directly to personal agents.

[[Well, there is the transitive verb *an-brechen*, with adventive-inceptive prefix *an-* added to the annihilative verb *brechen* 'to break' and giving it a non-annihilative nuance. Further, there is transitive *an-knack-s-en*, again with adventive-inceptive prefix *an-*; *-s* is a suffix to derive sound-reproductive verbs from expressives; the basic expressive here is *knack* [knak], imitative of a sharp short noise; *knack-s-en* is the intransitive verb designating such noises and, metonymically, also changes of state of objects (from being whole to being cracked) typically producing this very kind of noise (*Knack-s* is the event-result noun zero-derived from it); prefix *an-* transitivises intransitive *knacksen* and underlines the less-than-annihilative effect of the noisy action.]]

At long last my question:

Is this gap in German unique? Preliminary enquiries -- though of very limited crosslinguistic range -- suggest it is not. Is it easy or difficult or impossible to express the concept 'to cause something to be cracked' in the language(s) that you speak or know well?

I find this gap somewhat worrying, from a practical as well as a theoretical point of view. I'd assume (i) that anywhere brittle things frequently end up being cracked, and (ii) that in communities where German is spoken no less than in English-speaking parts of the world spontaneous crackings (ice comes to mind here, as temperature rises) are overall far less frequent than cracks caused by the carelessness of human agents, in artefacts or natural objects (including bones, which may crack from osteoporosis, but more commonly do so from some external impact).

If there is a difficulty with 'to cause something to be cracked', it might therefore be to do with the semantics of transitivity (intentionality, control, responsibility of agent, complete affectedness of patient -- with generally much stronger semantic constraints imposed on transitive construction in German than in English) rather than with frequency of use, a notion often invoked to account for the differential ease of expressibility of anything thinkable and sayable and in particular for the directionality of derivations of causatives or decausatives.

I'd appreciate any feedback.

And I'd like to gratefully acknowledge the unwitting input from Alex Tantos, discussing English *crack* at his thesis defence yesterday, if from the angle of Discourse Representation Theory and how it accounts for causation -- a really hard nut to crack.

Incidentally, the German verb here is *knacken* (a sound-based expressive like English *crack* [same etymon as German *krach-en*] and unlike motion-based *spring-en/Sprung*); but *knacken* in its transitive uses is only applicable to nuts and seeds, insects and arthropods with exoskeletons of chitin, safes, and riddles and codes (intransitively it is

used with a few things more, such as dead wood), and not to any brittle artefacts or natural objects where there is no question of an outside and an inside and an aperture being forced, literally or metaphorically, through the relevant impacting action.

[[Unlike *knack-en*, its derivative *knack-s-en* is only intransitive and requires prefixes such as *an-* for transitivisation; see above. While intransitive *knacken* and *knacksen* are rather similar, when *knacken* and *an-knacksen* are used transitively their meanings are subtly specialised.]]

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## Lexicographic appendix

### English

#### *ODEE*

crack V

A.

to make a sharp short noise	OE
to break with a sudden sharp report	XIII

B.

to utter loudly or sharply	XIV
to boast (dial.)	XV
whence: crack up 'eulogize'	XIX

OE *cracian* 'to sound, resound'  
OHG *chrahhōn*, G *krachen*

Normal continuation of OE *cracian*, namely *crake*, has been superseded by (shorter) *crack*, by association with noun *crack* (G *Krach*) or with Fr *craquer* (itself of Gmc origin).

[Which could be interpreted as suggesting that the N is more basic than the V.]

crack A

pre-eminent, first-class	XVIII
= attrib. use of N <i>crack</i> , 'that which is cracked up or highly commended'	

#### *CODCE*

crack

N

- |   |   |   |
|---|---|---|
| 1 | a | sudden sharp or explosive noise               |
|   | b | (voice) sudden harshness or change in pitch   |
| 2 |   | sharp blow                                    |
| 3 | a | narrow opening formed by a break              |
|   | b | partial fracture, with the parts still joined |
|   | c | chink   |
| 4 |   | mischievous or malicious remark or aside      |
| 5 |   | attempt                                       |
| 6 |   | exact moment                                  |
| 7 |   | first-rate player, horse, etc.                |

- 8 conversation, good company, fun  
 9 potent hard crystalline form of cocaine broken into small pieces

## V

- 1 tr/intr break without a complete separation of the parts  
 2 intr/tr make or cause to make a sudden sharp or explosive sound  
 3 intr/tr break or cause to break with a sudden sharp sound  
 4 intr/tr give way or cause to give way (under torture etc.)  
 5 intr (voice) become dissonant, break  
 6 tr find a solution (to a problem, code, etc.)  
 7 tr say in a jocular way  
 8 tr hit sharply or hard  
 9 tr decompose (heavy oils) by heat or pressure with or without a catalyst to produce lighter hydrocarbons  
 10 tr break (wheat) into coarse pieces

## A (attr.)

- 1 excellent, first-rate

## German

### *Kluge*

springen strong V  
 OHG springan  
 Gmc \*spreng-a-

abstract N Sprung  
 [prefixal verb zer-springen]

sprengen weak V, causative of springen  
 OHG sprengen  
 Gmc \*sprang-eja-

### **WBDGS**

springen

- 1 einen Sprung machen  
 2 sich schnell zu Fuß fortbewegen (in Sprüngen, großen Sätzen laufen)  
 3 etw wird mit Kraft schnell und plötzlich bewegt:  
 in die Höhe  
 aus seiner bisherigen Lage  
 aus etwas heraus

- 4 einen Sprung, Riss bekommen, plötzlich auseinanderbrechen, zerspringen
- 5 sich plötzlich öffnen, aufgehen, aufspringen
- 6 plötzlich und unvermittelt wechseln, zu etw völlig anderem übergehen

### Sprung

- 1 Bewegung, bei der die Beine kraftvoll vom Boden abgestoßen werden, so dass sich der ganze Körper sekundenlang über den Boden erhebt
- 2 'auf einen Sprung' = für kurze Zeit
- 3 kleine Entfernung, kurze Strecke
- 4 kleiner Spalt, Riss
- 5 plötzlicher Übergang, Wechsel
- 6 Gruppe von 4-8 Rehen (Jägersprache)

### sprengen 1

- 1 etw (Gebautes) durch Sprengstoff zerstören, vernichten
- 2 etw gewaltsam öffnen, aufbrechen

### sprengen 2

- 1 etw feucht machen, indem man Wasser darauf spritzt, sprüht

### sprengen 3

- 1 irgendwohin scharf reiten

### zerspringen

- 1 plötzlich (in Stücke) auseinanderbrechen  
[only intransitive!]

### zersprengen

- 1 etw in Stücke sprengen  
[only transitive!]

### knacken

- 1 einen kurzen, harten Laut, Knacks von sich geben
- 2 bewirken, dass etw mit einem Knacks zerbricht, sich öffnet
- 3 etw (Schloss, Panzerschrank) gewaltsam öffnen, aufbrechen [=2]
- 4 etw zerbricht mit einem Knacks

knack

lautnachahmend für einen kurzen harten Laut

Knacks [action-result noun zero-derived from verb knack-s-en]

- 1 knackendes Geräusch
- 2 Sprung, Riss

knacksen

= knacken 1 und 4

an-knacksen [adventive-inceptive prefix an-; -s a suffix to derive sound-reproductive verbs from expressives]

- 1 etw anbrechen

an-brechen

- 1 etw ein wenig brechen
- 2 beginnen etw zu verbrauchen, etw anreissen
- 3 beginnen