

(CD) A collateral damage is a damage which, in contrast to the intended aim of the action that brought this damage about, was not intended.

Elements:

In the example:

Act/action f

use of the sledgehammer

Agent X

me

Target-object Z

the spider

Intention, in the sense
of intended aim $A_{[Z]}$

the spider is killed

CD-victim Y

Mr. Egghead

Collateral Damage $\Omega_{[Y]}$

splitting the brain
of Mr. Egghead

$D(X,f)$ for: X does / performs the action f

$A \Rightarrow B$ for: A brings about B

$W(X,A)$ for: X wants that A

$B(X,A)$ for: X (strongly) believes / is convinced that A

Derivative Concepts:

$P(X,A)$ for: X believes it to be possible that A

$K(X,A)$ for: X knows that A

These derivatives can be defined as follows:

$B(X,A) := \neg P(X, \neg A);$
therefore $P(X,A)$ iff $\neg B(X, \neg A)$

$K(X,A) := B(X,A) \ \& \ A;$
knowledge is conviction which is correct

- (I) By doing f , X intends to bring it about A
 E.g.: By throwing a stone I_X intend to bring it about that the windowpane will brake.

$$D1 \quad I(X,f,A) := \\ D(X,f) \ \& \ W(X,A) \ \& \ B(X,D(X,f) \Rightarrow A)$$

By doing f , X intends to bring about that A , iff X does f , wants that A , and believes that his doing f will bring about A

E.g.: By throwing a stone, I_X intend to bring about that the windowpane brakes iff (i) I throw the stone, (ii) I want that the windowpane will be broken, and (iii) I believe, that this aim (the windowpane's being broken) will be brought about by my throwing the stone.

$$(KANT) \quad W(X, A_1) \ \& \ B(X, A_1 \supset A_2) \rightarrow W(X, A_2)$$

$$(KANT^*-?) \ W(X, A_1^*) \ \& \ B(X, A_1 \supset A_2) \rightarrow W(X, A_2^*)$$

$$(KANT^*) \quad W(X, A_1^*) \ \& \ B(X, A_1 \supset A_2) \rightarrow W(X, A_2)$$

(CD) A collateral damage is a damage which, in contrast to the intended aim of the action that brought this damage about, was not intended.

(CD.1) $CD(\Omega, Y, X, f, A, Z) :=$

(1) $I(X, f, A_{[Z]}) \ \&$

(2) $(D(X, f) \Rightarrow \Omega_{[Y]}) \ \&$

3 $\neg I(X, f, \Omega_{[Y]})$

Ω is a Collateral Damage to Y brought about by X ' action f , by means of which X was intending / attempting to bring about that A is true for z .

(CD.1*) $CD(\Omega, Y, X, f, A, Z) \leftrightarrow$

(1a) $D(X, f) \ \&$

(1b) $W(X, A_{[Z]}) \ \&$

(1c) $B(X, D(X, f) \Rightarrow A_{[Z]}) \ \&$

(2) $(D(X, f) \Rightarrow \Omega_{[Y]}) \ \&$

3 $\neg I(X, f, \Omega_{[Y]})$

Ω is a Collateral Damage to Y brought about by X ' action f , by means of which X intends / attempts to bring about that A is true for Y iff

(1a) X does f

(1b) X wants, that, for Z (the target object) it holds that A ($= A_{[Z]}$)

(1c) X believes that his doing f brings about that $A_{[Z]}$

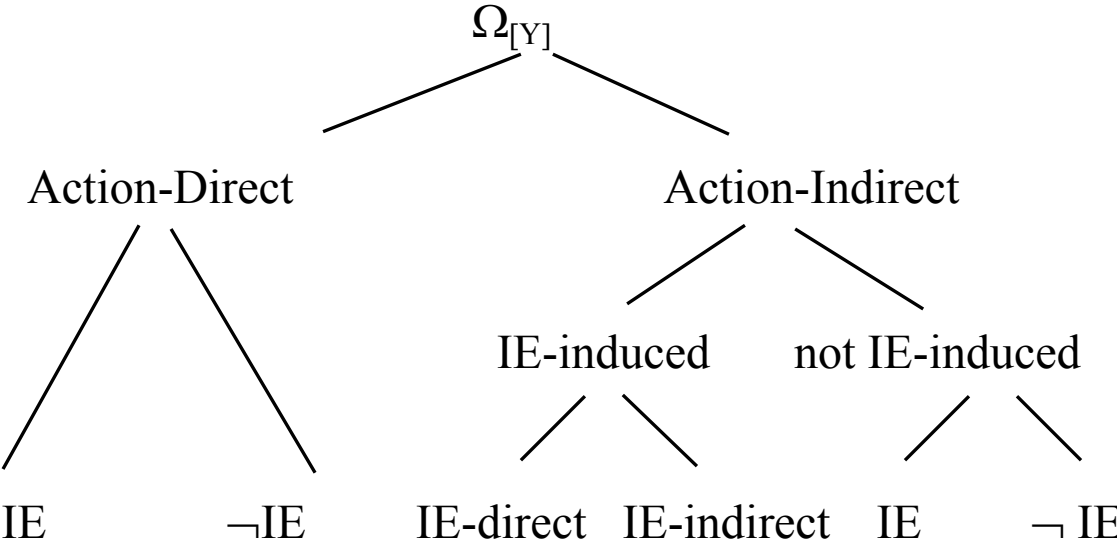
3 $D(X, f)$ brings about that $\Omega_{[Y]}$ – that Y has to suffer damage Ω

(3) It is not the case that X , by doing f , intends to bring about $\Omega_{[Y]}$

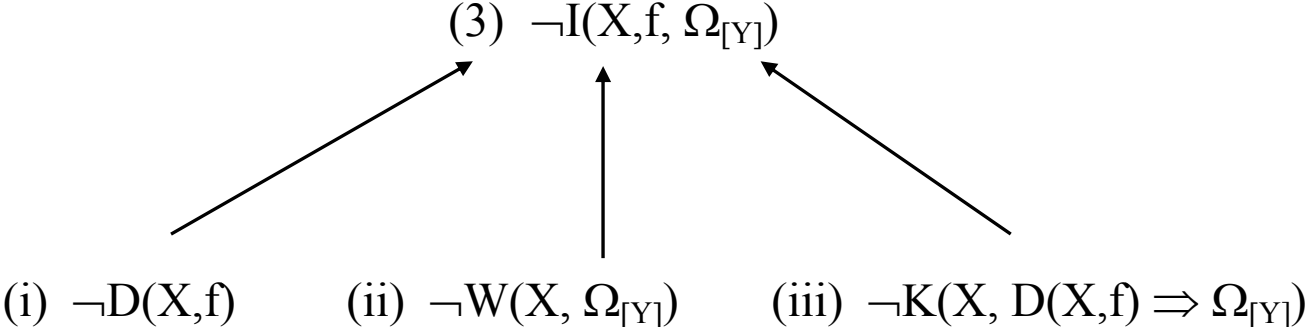
(T.1?) $CD(\Omega, Y, X, f, A, Z) \rightarrow IS(X, f, A_{[Z]})$

(T.1.1?) $CD(\Omega, Y, X, f, A, Z) \rightarrow (D(X, f) \Rightarrow A_{[Z]})$

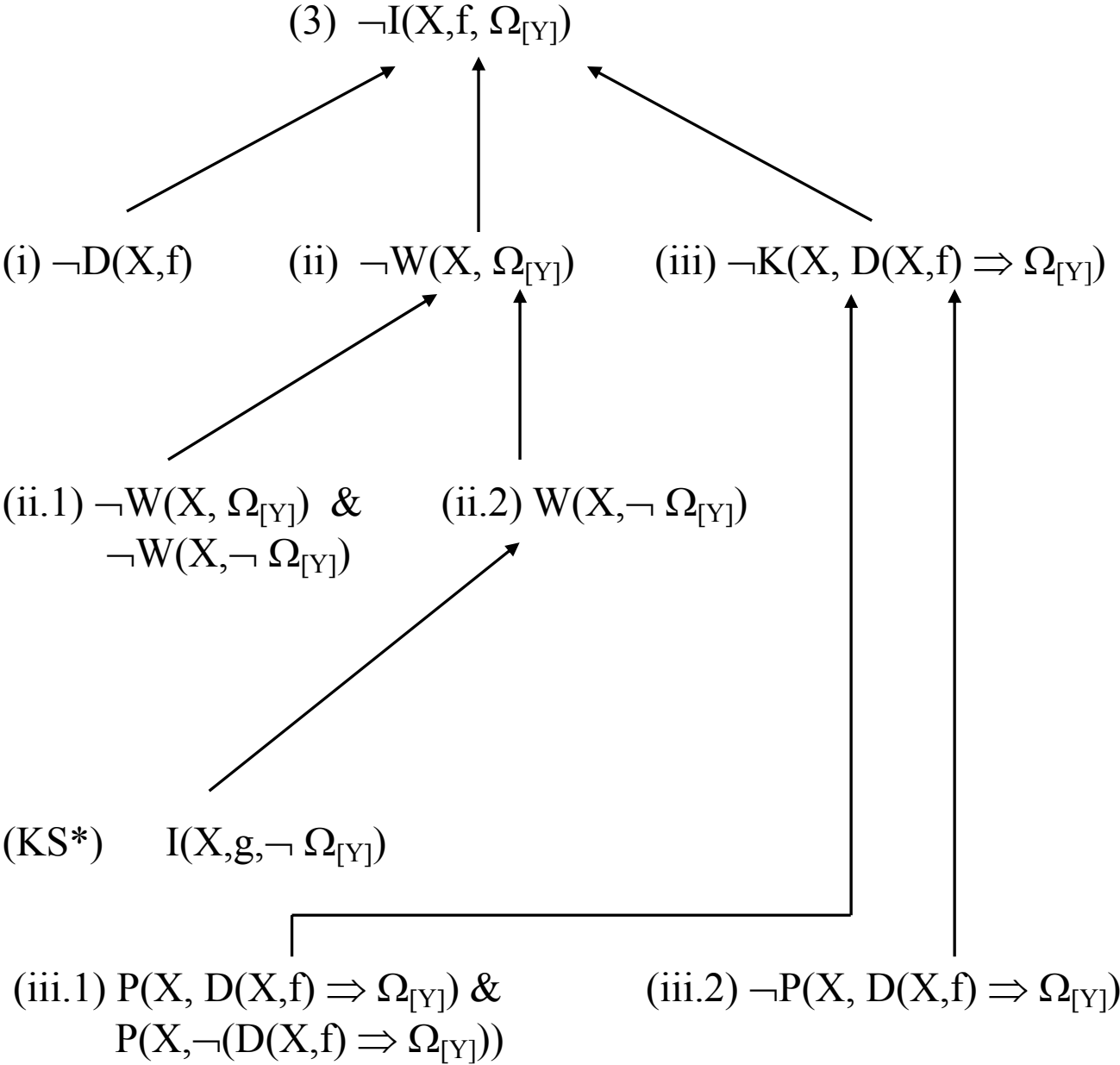
(T.1.2?) $CD(\Omega, Y, X, f, A, Z) \rightarrow A_{[Z]}$



- I $\Omega_{[Y]}$ action-direct & IS (intention-success) CD
- II $\Omega_{[Y]}$ action-direct & \neg IS-D
- III $\Omega_{[Y]}$ action-indirect & IS-direct induced CD
- IV $\Omega_{[Y]}$ action-indirect & IS-indirect induced CD
- V $\Omega_{[Y]}$ action-indirect & not IS induced CD

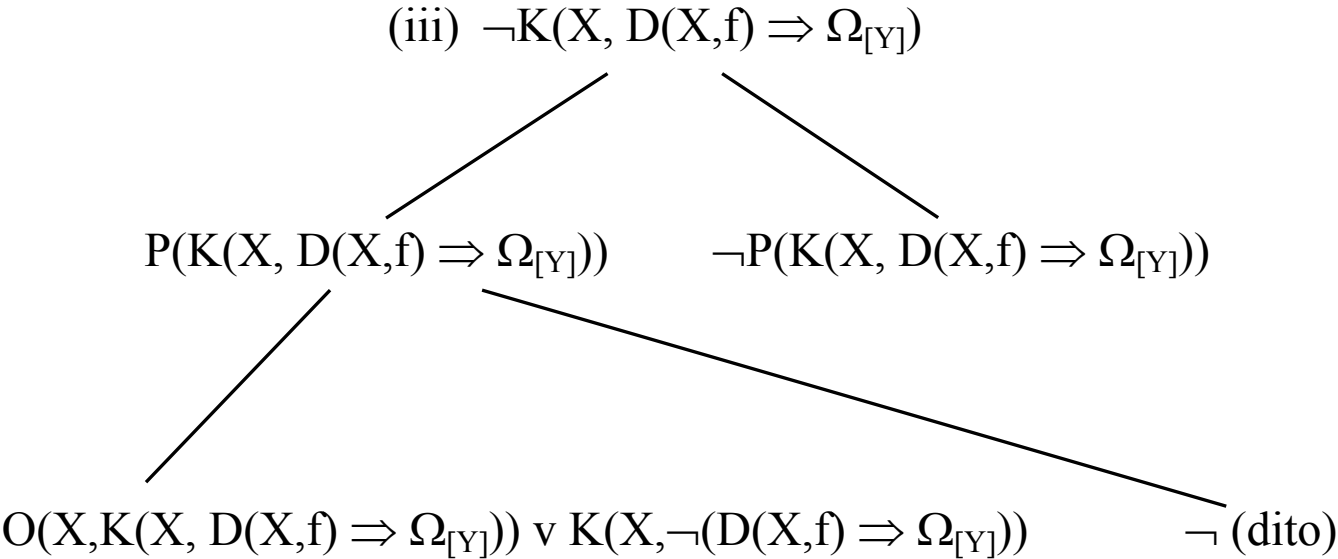


- [1] $\neg(\text{ii}) \ \& \ \neg(\text{iii})$
- [2] $(\text{ii}) \ \& \ \neg(\text{iii})$
- [3] $\neg(\text{ii}) \ \& \ (\text{iii})$
- [4] $(\text{ii}) \ \& \ (\text{iii})$



Combination	Preference	Knowledge / Belief
[1] $\neg(\text{ii}) \ \& \ \neg(\text{iii})$	$W(X, \Omega_{[Y]})$	$K(X, \Rightarrow)$
[2] $(\text{ii}) \ \& \ \neg(\text{iii})$	$\neg W(X, \Omega_{[Y]})$	
[2.1] $(\text{ii.1}) \ \& \ \neg(\text{iii})$	$\neg W(X, \Omega_{[Y]}) \ \& \ \neg W(X, \neg \Omega_{[Y]})$	$K(X, \Rightarrow)$
[2.2] $(\text{ii.2}) \ \& \ \neg(\text{iii})$	$W(X, \neg \Omega_{[Y]})$	
[3] $\neg(\text{ii}) \ \& \ (\text{iii})$	$\left. \begin{array}{l} \\ \\ \\ \end{array} \right\} W(X, \Omega_{[Y]})$	$\neg K(X, \Rightarrow)$
[3.1] $\neg(\text{ii}) \ \& \ (\text{iii.1})$		$P(X, \Rightarrow) \ \& \ P(X, \neg \Rightarrow)$
[3.2] $\neg(\text{ii}) \ \& \ (\text{iii.2})$		$B(X, \neg \Rightarrow)$
[4] $(\text{ii}) \ \& \ (\text{iii})$	$W(X, \Omega_{[Y]})$	$\neg K(X, \Rightarrow)$
[4.1] $(\text{ii.1}) \ \& \ (\text{iii.1})$	$\left. \begin{array}{l} \\ \\ \end{array} \right\} \neg W(X, \Omega_{[Y]}) \ \& \ \neg W(\neg \Omega_{[Y]})$	$P(X, \Rightarrow) \ \& \ P(X, \neg \Rightarrow)$
[4.2] $(\text{ii.1}) \ \& \ (\text{iii.2})$		$B(X, \neg \Rightarrow)$

[4.3] $(\text{ii.2}) \ \& \ (\text{iii.1})$	$\left. \begin{array}{l} \\ \\ \end{array} \right\} W(X, \neg \Omega_{[Y]})$	$P(X, \Rightarrow) \ \& \ P(X, \neg \Rightarrow)$
[4.4] $(\text{ii.2}) \ \& \ (\text{iii.2})$		$B(X, \neg \Rightarrow)$
(CD*)	$I(X, g, \neg \Omega_{[Y]})$ for some g	$B(X, D(X, g) \Rightarrow \neg \Omega_{[Y]})$



<[4], III,PK,OK>

as short for

- [4] $(\neg W(X, \Omega_{[Y]})) \ \& \ \neg K(X, D(X, f) \Rightarrow \Omega_{[Y]}) \ \&$
 (III) $\Omega_{[Y]}$ action-indirect & IS-direct-induced &
 PK & OK: The $\Omega_{[Y]}$ -causation could & should
 have been known