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Argument Type Identification Procedure (ATIP)

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This document contains a description of the Argument Type Identification Procedure (ATIP) for the types of argument distinguished in the Periodic Table of Arguments (PTA). For more info on this classification of argument see www.periodic-table-of-arguments.org.

The Argument Type Identification Procedure (ATIP) is a heuristic device that helps the analyst to identify a type of argument that occurs in an argumentative text or discussion and is expressed in natural language. The procedure starts from a reconstruction of the two statements that together form the argument – the ‘conclusion’ and the ‘premise’– and results in labelling the argument with a type indicator. The identification of the type of argument enables the analyst to formulate the underlying mechanism of the argument, thereby preparing the ground for its evaluation.

Step 1 – Reconstruct the statements

Within the theoretical framework of the PTA, an argument is taken to consist of two statements: a ‘conclusion’, which is a statement of which the truth or acceptability is contested or doubted, and a ‘premise’, which is a statement that is put forward in order to establish or increase the truth or acceptability of the conclusion. In order to be able to identify the type of argument that is instantiated by these statements, their content should be reconstructed from the original discourse. In the argument *The suspect was driving fast, because he left a long trace of rubber on the road*, the word *because* indicates that the first clause functions as the conclusion and the second as the premise, while *he* can be replaced with *the subject* in order to provide a maximally informative reconstruction of the content of the statements.

Example 1

The suspect was driving fast, because he left a long trace of rubber on the road

Reconstruction of the statements

conclusion	<i>the suspect was driving fast</i>
premise	<i>[the suspect] left a long trace of rubber on the road</i>

Step 2 – Identify the subjects and predicates

Once the two statements that function as the conclusion and the premise of the argument are reconstructed, they are further analyzed in terms of their constituents. Within the theoretical framework of the PTA, each statement is taken to consist of a ‘subject’, i.e., an entity about which something is said, and a ‘predicate’, i.e., that what is said about the entity. In the statement *The suspect was driving fast*, for instance, *the suspect* functions as the subject and *was driving fast* functions as the predicate.

Example 1

The suspect was driving fast, because [the suspect] left a long trace of rubber on the road

Identification of the subject and predicate

	subject	predicate
conclusion	<i>the suspect</i>	<i>was driving fast</i>
premise	<i>[the suspect]</i>	<i>left a long trace of rubber on the road</i>

Step 3 – Determine the argument form

The ‘argument form’ is an abstract representation of the specific constellation of the subjects and predicates that occur in the conclusion and the premise of the argument. Closely following logical conventions, subjects are indicated with letters *a*, *b*, etc., predicates with letters *X*, *Y*, etc. (predicate ‘*T*’ having the fixed meaning ‘true’), and complete propositions with letters *p*, *q*, etc. For example, the argument *The suspect was driving fast, because [the suspect] left a long trace of rubber on the road* instantiates the argument form ‘*a* is *X*, because *a* is *Y*’.

Example 1

The suspect was driving fast, because [the suspect] left a long trace of rubber on the road

Determination of the argument form

The suspect (a) was driving fast (X), because [the suspect] (a) left a long trace of rubber on the road (Y)

→ *a* is *X*, because *a* is *Y*

Within the theoretical framework of the PTA, four basic argument forms are distinguished, which is reflected in the visual representation of the table as divided into four ‘quadrants’. Figure 1 contains an overview of the four argument forms, their names, and the corresponding quadrant of the table:

argument form	name	quadrant
<i>a</i> is <i>X</i> , because <i>a</i> is <i>Y</i>	first-order predicate argument	alpha
<i>a</i> is <i>X</i> , because <i>b</i> is <i>X</i>	first-order subject argument	beta
<i>q</i> is <i>T</i> , because <i>r</i> is <i>T</i>	second-order subject argument	gamma
<i>q</i> is <i>T</i> , because <i>q</i> is <i>Z</i>	second-order predicate argument	delta

Figure 1 Argument forms distinguished in the PTA

An example of a first-order argument has already been provided. Examples of argument types that instantiate the other three argument forms are given below.

Example 2

Cycling on the grass is forbidden, because walking on the grass is forbidden

Determination of the argument form

Cycling on the grass (a) is forbidden (X), because walking on the grass (b) is forbidden (X)

→ *a* is *X*, because *b* is *X*

Example 3

He must have gone to the pub, because the interview is cancelled

Determination of the argument form

He must have gone to the pub (q) [is true] (T), because the interview is cancelled (r) [is true] (T)

→ *q* is *T*, because *r* is *T*

Example 4

We only use 10% of our brain, because [we only use 10% of our brain] was said by Einstein

Determination of the argument form

We only use 10% of our brain (q) [is true] (T), because [we only use 10% of our brain] (q) was said by Einstein (Z)

→ *q* is *T*, because *q* is *Z*

While examples 1 and 2 can be analyzed on the level of the propositions, examples 3 and 4 should be analyzed on the level of assertions, which means the analyst has to add the predicate ‘is true’ to the conclusion and/or the premise. For completing this step in the procedure, it is advised to use the decision tree pictured in Figure 2, which contains three heuristic questions as well as the corresponding instructions and observations depending on the answers to these questions.

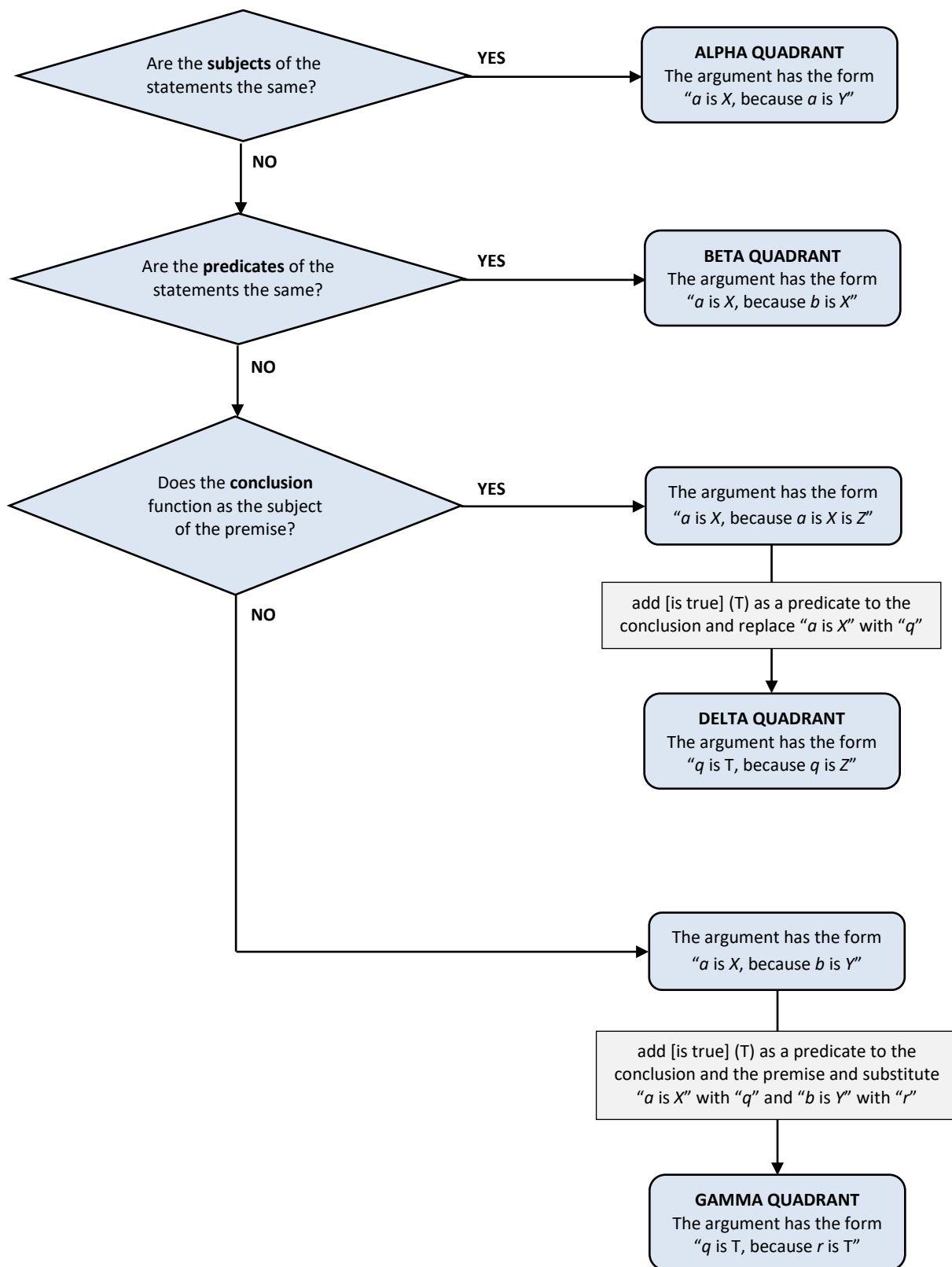


Figure 2 *Decision tree for determining the argument form*

Step 4 – Characterize the argument substance

Apart from by its ‘argument form’, each type of argument distinguished within the theoretical framework of the PTA is characterized by its ‘argument substance’. This notion is defined as the specific combination of types of statements the argument instantiates. The labelling of the type of statement is done in accordance with a widely used tripartite typology of statements developed within debate theory that consists of:

- statements of fact (F), such as *The suspect left a long trace of rubber on the road*
- statements of value (V), such as *This painting is beautiful*
- statements of policy (P), such as *Children should not sleep with artificial lightning*

By labelling both the conclusion and the premise of the argument in this way, the argument can be characterized as a specific combination of types of statements. The argument *The suspect was driving fast, because the suspect left a long trace of rubber on the road*, for instance, is a combination of a statement of fact (F) with another statement of fact (F).

Example 1		
<i>The suspect was driving fast, because [the suspect] left a long trace of rubber on the road</i>		
Characterization of the argument substance		
	statement	type of statement
conclusion	<i>the suspect was driving fast</i>	statement of fact (F)
premise	<i>[the suspect] left a long trace of rubber on the road</i>	statement of fact (F)

Step 5 – Provide the systematic name of the argument

The systematic name of an argument is a symbolic representation of the results of Step 3 and 4 and consists of

- the prefix “1” or “2”, indicating a first-order or a second-order argument
- the infix “pre” or “sub”, indicating a predicate or subject argument
- the suffix “FF”, “VF”, etc., indicating the types of statements instantiated by the argument

For each of the four examples, the systematic name of the type of argument is mentioned below.

Example 1
<i>The suspect was driving fast, because [the suspect] left a long trace of rubber on the road</i>
Systematic name
first-order predicate argument combining a statement of fact with another statement of fact
→ 1 pre FF

Example 2
<i>Cycling on the grass is forbidden, because walking on the grass is forbidden</i>
Systematic name
first-order subject argument combining a statement of value with another statement of value
→ 1 sub VV

Example 3
<i>He must have gone to the pub [is true], because the interview is cancelled [is true]</i>
Systematic name
second-order subject argument combining a statement of value with another statement of value
→ 2 sub VV

Example 4
<i>We only use 10% of our brain [is true], because [we only use 10% of our brain] was said by Einstein</i>
Systematic name
second-order predicate argument combining a statement of value with a statement of fact
→ 2 pre VF

More analyses of examples of arguments within the four quadrants of the table can be found at the website of the *Periodic Table of Arguments* at www.periodic-table-of-arguments.org.