

**Frans van Eemeren, Bart Garssen and Bert Meuffels,**  
***Fallacies and Judgments of Reasonableness. Empirical***  
***Research Concerning the Pragma-Dialectical Discussion***  
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## **Introduction**

In argumentation as elsewhere, if norms are needed for some purpose, these may or may not be accepted by those whose behavior is regulated. In the Pragma-dialectical normative model of a critical discussion, the primary function of argumentation is located in the resolution of a difference of opinion. Hence, the research question is: Are the Pragma-dialectical rules *conventionally valid* (i.e., intersubjectively accepted by lay persons) and if so to what extent? This book reports the details of turning the above into an empirical question for part of these rules. Briefly, the answer is: Yes, to a large extent.

Chapter 1 provides an overview of extant treatments of the fallacies and summarizes the content and aim of this investigation. Chapter 2 discusses the design of previous studies by other authors and chapter 3 the design of this study. This occurs in exemplary manner and with respect to particular violations of a specific discussion rule (*freedom rule*). Chapter 4 presents further violations of the same rule and discusses the study's internal and external validity. Chapter 5 treats the conventional validity of the *obligation-to-defend-rule* in a non-mixed difference of opinion. Chapter 6 extends

this to mixed disputes (in which both parties have forwarded a standpoint). Chapter 7 is concerned with the *argumentation-scheme-rule*, chapter 8 with the argument from ignorance (*ad ignorantiam*) as a violation of the *concluding-rule*, chapter 9 presents the study's main results.

Hample (2010) already provided an excellent review of this book which readers should consult. This review mostly summarizes the study's main results and provides occasional comments. An overall evaluation is in Section 3.

## 2. The Chapters

**2.1.** Orienting the reader as to the focus of this book – “the views of ordinary arguers concerning fallacious argumentative moves” (p. 1) –, chapter 1, *Theoretical Background and Organization of the Study*, is a brief historical overview of fallacy treatments from Aristotle *via*, amongst others, Locke and Whatley to 20<sup>th</sup> century textbooks. Pages 20 and onwards summarize the ten Pragma-dialectical discussion rules. According to these, and unlike logical errors, fallacies are understood *not* as invalid inferences, but as impediments (*faux pas*) to resolution-oriented communication (‘unreasonable discussion moves’). Considerations regarding the rules’ *problem validity* (i.e., their potential to *rule out* moves that impede a resolution) and their *conventional validity* lead to the following characterization:

Seen from a pragma-dialectical perspective, any infringement, whichever party commits it, and at whatever stage in the discussion, is a possible threat to the resolution of a difference of opinion and must therefore be regarded as an incorrect discussion move or “fallacy.” The term *fallacy* is thus systematically connected with the rules for critical discussion and defined as *a speech act that prejudices or frustrates efforts to resolve a difference of opinion.* (p. 27)

Moreover, the rules’ problem-validity is stated to be an analytical-theoretical question (*ibid.*). Their *conventional validity* is a matter of empirical investigation. Importantly:

The status of the results of this empirical work is special: The empirical data can neither be used as “means of falsification” nor as “proof” of the problem validity of the pragma-dialectical discussion rules. In the event that the empirical studies indicate that ordinary language users subscribe to the discussion rules, it cannot be deduced that the rules are therefore instrumental. The reverse is also true: If the respondents in our studies prove to apply norms that diverge from the pragma-dialectical discussion rules, it cannot be deduced that the theory is wrong. Anyone who refuses to recognize this is guilty of committing the naturalistic fallacy, the fallacy that occurs when one inductively jumps from “is” to “ought.” (p. 27)<sup>1</sup>

Thus, the specific Pragma-dialectical way of (theoretically) identifying a fallacy is *compared* – not tested (!), in the sense of ‘hypothesis-testing research’ – with ordinary speakers’ judgments. As fallacies may occur in any of the four discussion stages (*confrontation*, *opening*, *argumentation*, *concluding stage*), table 1.1 (p. 29) lists four of the ten rules (*freedom*, *obligation-to-defend*, *argument-scheme*, and *concluding rule*), one from each stage. Each rule is associated with (variants of) traditionally named fallacies. In summary, the project treats the following:

(1) In the *confrontation stage*, with respect to the freedom rule and with reference to the opponent: *argumentum ad hominem* (abusive, circumstantial, and *tu quoque* variants), *ad baculum* (physical and non-physical), *ad baculum* (direct and indirect), *ad misericordiam*; with reference to the standpoint: declaring a standpoint taboo, declaring a standpoint sacrosanct.

(2) In the *opening stage*, with respect to the obligation-to-defend rule: Shifting the burden of proof or evading it in a *non-mixed* dispute by (i) presenting a standpoint as self-evident, (ii) giving a personal guarantee of the rightness of a standpoint, (iii) immunizing a standpoint against criticism, and evading the burden of proof in a *mixed dispute* by insisting that only the other party must defend his or her standpoint as a result of applying the principle of presumption or the criterion of fairness.

<sup>1</sup> On this stance, also see van Eemeren (2010, p. 6f.).

(3) In the *argumentation stage*, with respect to the argument scheme rule: *argumentum ad consequentiam*, *argumentum ad populum*, slippery slope and false analogy.

(4) In the *concluding stage*, with respect to the concluding rule: *argumentum ad ignorantiam*.

Notably, comparison of the theoretical judgment with that of ordinary speakers is exhaustive for the *freedom rule* and the *obligation to defend rule*, insofar as “all rule violations are included [in this study] that have been distinguished so far” (p. 29) – non-exhaustive otherwise.

**2.2.** Chapter 2, *Considerations Regarding the Design of the Study*, critically reviews Bowker and Trapp’s (1992) research on ordinary arguers’ assessment of good *vs.* poor argumentation and that of Schreier, Groeben and Christmann (1995), employing naturalistic discourse samples. Both studies are said to pursue an empirical-descriptive conception of reasonableness (Slogan: Obtain sample, ask for response, extract norm). In contrast, the present study starts from a normative foundation (Slogan: Use norm to construct sample, ask for response, assess overlap between response and norm).

Bowker and Trapp presented respondents with excerpts of natural discourse to elicit and then systematize subjects’ verbal responses regarding an items’ reasonableness. On this *post hoc* method – this is the authors’ main criticism –, a consistent and homogenous concept of reasonableness is not forthcoming. In particular, the standards for separating an argument’s intrinsic reasonableness from its persuasiveness (the “separation of a ‘rhetorical influence’,” p. 36) are unclear. Moreover, a stepped data-reduction technique was motivated statistically, rather than qualitatively, in sum negatively affecting the four factors of argumentative reasonableness being distinguished (*individual elements, emotions, connections, argument congruence*). In brief, it is unclear if these terms remain meaningful beyond Bowker and Trapp’s data.

The design by van Eemeren, Garssen and Meuffels requires constructing two disjunct sets of *argumentative discourse items* (mini-dialogues). In these, either none or some specific Pragma-dialectical rule is violated. Then, differences in respondents’ reasonableness values for an item become subject to measures of statistical significance. This means, *internal validity* is

achieved by (argumentation-)expert agreement on some particular Pragma-dialectical discussion rule (not) being violated by some non-natural discourse item. To achieve *external validity*, intervening factors must be controlled, crucially *politeness* (p. 39).<sup>2</sup> After all, an item's politeness might be measured along with (even instead of) its reasonableness. So, impolite reasonableness could register as unreasonableness. Such misleading results would threaten the study's external validity.

Schreier, Groeben and Christmann (1995) sought to explicate and test ordinary arguers' assessment of *argumentative integrity*. This notion was captured in four requirements (*formal validity, sincerity/truth, content* and *procedural justice* among participants). Maintaining integrity was explicated as not consciously violating any of these (p. 42). Van Eemeren *et al.* criticize that validity of content is not readily a meaningful requirement. Moreover, the explication is said to be psychologistic, because an argumentative move is unreasonable only if it so *appears* to someone.

Schreier, Groeben and Christmann had selected a range of naturalistic texts exemplifying "rhetorical strategies" (p. 43). They took these to violate the above four requirements, then asked respondents to assess an item's *argumentative fairness*. Responses were "distilled" into eleven standards of unfair argumentation (e.g., do not treat your discussion partner intentionally, purposefully as if he or she is a personal enemy). Like Bowker and Trapp's study, the main problem is found in arriving at these standards *inductively*. The genesis of four factors and eleven standards is said to be *ad hoc*. Further critical considerations pertain to response biases ("set") and the loadedness of the discourse examples – both not controlled for.

A careful discussion in support of *experimentally* studying the conventional validity of (some of) the Pragma-dialectical discussion rules follows, and the use of constructed (*vs.* observed/natural) discourse items is defended (p. 48f.). Ultimately, the authors' strategy is to balance the artificiality of "made-up" discourse with the directness with which 'expert *vs.* lay person reasonableness judgment-differences' can affect the Pragma-dialectical explication of (some of) the norms of argumentative fairness.

<sup>2</sup> For example, what experts consider a rule-non-violating instance of an *ad hominem* attack might receive less than the expert-expected reasonableness value, because respondents consider it an impolite move.

Just as would be the case in corpus research, in our series of experiments the conventional validity of the pragma-dialectical rules is investigated not in a direct, but in an indirect sense. Due to the fact that discussion fragments that contain a fallacy are found to be unreasonable by normal judges, and fragments that do not contain any fallacies are deemed reasonable, we deduce that in the judgment of the fairness of argumentation the respondents concerned appeal, whether implicitly or explicitly, *to norms that are compatible, or at least not contradictory*, to rules formulated in the pragma-dialectical argumentation theory. (p. 49, *italics added*)

Not directly testing the Pragma-dialectically rules – as one would by asking: Do you agree with these rules? – is supported as follows: (i) It is not clear that direct testing is possible without bias; (ii) lay person's agreement with the *abstract* content of rules need not transfer to *specific* application cases of these rules; (iii) absent a more profound understanding of the Pragma-dialectical rules and associated concepts (e.g., standpoint, argument scheme), responses will not readily be meaningful. The upshot:

It is therefore not possible to investigate the conventional validity in a direct manner. [Nevertheless, t]he indirect way – investigating the judgments on rule violation – in our opinion does say a great deal about the conventional validity of the pragma-dialectical discussion rules (p. 50).

The authors stress that test-items (two to four turn-“dialogues”) were generated from the Pragma-dialectical rules, rather than a prior conception of fallacy. For example, an *ad hominem* attack is not viewed as fallacious *per se*, but only when occurring in the confrontation stage. Moreover, the Pragma-dialectical project of recovering some of the traditionally recognized fallacies also generates new fallacies (which might not be distinguished in other approaches). “If our respondents reject these ‘new’ violations, then in any event the claim can no longer be sustained that our results are just as applicable to other fallacy approaches” (*ibid.*).

**2.3.** Chapter 3, *Ad Hominem Fallacies: An Exemplary Study*, reviews extant opinions on the *ad hominem* to elucidate the study's design choices. The result: To construct a discourse item violating the Pragma-dialectical

freedom rule, (i) the dialogue must occur in the confrontation stage; (ii) it must not be possible to misinterpret the attack as a critical question resulting from an authority argument (this belongs into the argumentation stage); (iii) the *ad hominem* must occur as a response to presenting a standpoint and not to its attempted defense (argumentation stage again); (iv) the personal attack must not be the standpoint itself (see p. 56f).

Three discussion contexts are created by binary variation of *formal content* and *critical content* (p. 61). This yields the *domestic discussion*, here abbreviated D [- , -] (i.e., *non-formal*, *non-critical* content), the *political debate*, P [+ , -], and the *scientific discussion*, S [+ , +].<sup>3</sup> Thus, assumptions on the constitution of a particular reasonableness judgment are allowed to have measurable effect. Two assumptions are made: (i) A respondent's reasonableness-judgment value (here abbreviated RJV) for a given discourse item  $x$  is a function of that item's politeness value (V-POL) and its argumentative value (V-ARG) (*ibid.*). In brief:  $RJV_x = f(V-POL_x, V-ARG_x)$ .<sup>4</sup> (ii) Respondents are, across contexts, more sensitive to *either* V-POL *or* V-ARG.

On these assumptions, let  $n$  signify a particular discussion rule violation (aka. fallacy) to be investigated. Then two conditions (data patterns) are claimed to be telling (*ibid.*) if satisfied by the *averaged* reasonableness judgment value, ARV, that subjects assigned<sup>5</sup> to some discourse items constructed for contexts D, P and S ( $ARV_D$ ,  $ARV_P$ ,  $ARV_S$ ). Here, a lower ARV is a smaller number on a 7-point scale, ranging from very reasonable (7) to very unreasonable (1). 4 is the middle point.

(+ POL) More sensitive to politeness value:<sup>6</sup>  $ARV_D > ARV_P = ARV_S$   
 (+ ARG) More sensitive to argumentative value:  $ARV_S < ARV_P = ARV_D$

To ascertain whether subjects are, on average, more or less sensitive to either politeness or argumentative value, one observes under variation of

<sup>3</sup> The absence of signature [-, +] is not motivated. Presumably, non-formal and critical content do not go together.

<sup>4</sup> Read: The reasonableness judgment value of item  $x$  is a function of  $x$ 's politeness value and its argumentative value.

<sup>5</sup> Strictly speaking, an item's ARV is not assigned, but *calculated* by averaging over the RJVs assigned to that item.

<sup>6</sup> In the following, read '='; '<' and '>' by fronting '(statistically) significantly.'

contexts if averaged responses display ARV-difference and, if so, in what direction. This means to combine three types of personal attacks (*tu quoque*, circumstantial, abusive) with three types of discussion contexts as independent variables. Dialogue fragments were constructed and non-fallacious items added (“mixed message design”, p. 65f.). Questionnaires contained 48 fragments (36 fallacious, 12 controls), explicitly introducing the context, its characteristics, and standpoints by a suitable indicators. The order of contexts was varied (non-significant effect), loaded topics avoided, and the truthfulness of dialogue partners (non-deception scenario) explicitly stipulated (p. 66f).

Results are claimed to confirm four hypotheses:

- (H1) The ARV of a freedom rule violation is lower than when no violation occurs (p. 59).
- (H2) The ARV of the *ad hominem* decreases from *tu quoque* over circumstantial to abusive (p. 60).
- (H3) On the assumption that respondents display behavior which indicates being more sensitive to an item’s argumentative value (its “soundness character,” p. 61), the ARV of an *ad hominem* attack orders the three contexts as follows: (i)  $ARV_D > ARV_S$ ; (ii)  $ARV_P > ARV_S$ ; (iii)  $ARV_P = ARV_D$  (p. 62).
- (H4) Sex (male/female distinction) is not an explanatory factor (p. 69).

The chapter also discusses additional measures and replicas devised to rule out the alternative explanation that politeness considerations are, in large part, explanatory of the data. Results indicate that politeness does largely not matter, insofar as the *relative* difference in ARVs (for various types of *ad hominem* attacks) is a robust factor. Whether the *absolute* values (table 3.3, p. 68) are equally encouraging may be debated. For example, a direct attack in a scientific context receives an ARV of 2.57 (standard deviation<sup>7</sup> 0.81); a *tu quoque* in the same context 3.66 (0.86). The values may

<sup>7</sup> The standard deviation is a measure of the variability (or spread) of data. It is calculated by squaring the difference between the value of each data point in a data set and the mean, summing over all differences, and dividing by the number of data points, then taking the square root. Adding/subtracting the standard deviation to/from the mean indicates, but does not precisely *determine* the spread. Incidentally, the interpretive use of the stan-



be perceived as too high. It may also be debated if it made a difference had hypothesis H3 or H4 come about after glimpsing at data or prior to such “peeking” (Rehg 2009, pp. 173-176).

**2.4.** Chapter 4, *The Confrontation Stage: The Freedom Rule*, seeks to clarify whether the pattern observed in chapter 3 – discussants show, on average and as a function of discussion contexts, systematically different tolerance towards *ad hominem* violations of the freedom rule – does “also apply to other violations of the freedom rule” (p. 86), i.e., *ad baculum*, *ad misericordiam* and declaring a standpoint taboo or sacrosanct. The design is similar to that described above, so are the results.

[T]he *argumentum ad baculum* was found to be the most unreasonable, then declaring the standpoint taboo or sacrosanct, followed by the direct person attack, then the *argumentum ad misericordiam* and the indirect personal attack, and finally the *tu quoque* fallacy. (p. 95)

Explaining this by politeness considerations is claimed to be unsupported by the data (p. 97). Moreover, an interesting anomaly is presumed to be an effect of the loadedness of standpoints (pp. 97-102). Based on replicas and previous studies in experimental psychology, the authors suggest:

The more a person agrees with a standpoint of the protagonist, the less reasonable (...) [will she find] the attack of the antagonist on the protagonist of that standpoint – and the other way around: The less a person agrees with the standpoint, the more reasonable (...) [will she find] the attack on the protagonist of that standpoint. (p. 101)

For example, assume you are committed to the general non-relevance of racial considerations. If so, then you will expectably find violations of the freedom rule in response to a protagonist forwarding a racial standpoint rather reasonable (Catchphrase: Reasoning is determined by attitude rather than *vice versa*, see p. 100). Thus, being committed to the content of a stand-

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dard deviation in Zenker (2009) is non-sensical. A crucial error consisted in mistaking non-normally for normally distributed data.

point positively influences judgment as to the reasonableness of *silencing* a protagonist of an opposed standpoint – behavior which goes against the Pragma-dialectical rules (Even a racist should *not* be hindered to speak!). At least for students (participants were students), the authors generalize:

[I]t can be concluded that all argumentation, whether it is sound or not, is found to be less reasonable if it goes against a standpoint with which the students agree. The opposite also applies: Argumentation, sound or otherwise, is generally found to be more reasonable if it goes against a standpoint with which the students disagree. (p. 101)

Nevertheless, the overall pattern persists: Fallacies receive comparatively lower ARVs. Readers expecting a discussion of the hypothesis that all reasonableness judgments (not just in case of loaded standpoints) may trace subjects' biases – rather than the sensitivity to a reasonableness value component – are disappointed.

Instead, a discussion of potential cultural differences follows. Studies were conducted in the Netherlands (92 participants, replication 24), England (60), Germany (41), Spain (47, replication 30), Indonesia (50). The typical rank order of the fallacies is similar, although the indirect and the *tu quoque* variant seem not clearly distinguished outside of the Netherlands (p. 102f.). Moreover, the influence of contexts (*domestic, political, scientific*) onto reasonableness values seems to break down in England, Germany and Indonesia. In Spain, face-threatening (impolite) moves appear to be non-permissible even in a domestic context, suggesting that politeness may take on different functional roles (p. 107). Tackling the “cultural factor” is left for future work.

**2.5.** Chapter 5, *The Opening Stage: The Obligation-to-Defend-Rule (I)*, (“Discussants who advance a standpoint may not refuse to defend this standpoint when requested to do so,” p. 112) presents six experiments on forms of *shifting* or *evading the burden of proof* (BOP) by presenting it as self evident, by personally guaranteeing it, and by otherwise immunizing it. Note that only shifting the BOP can occur in a *non-mixed* dispute (single difference of opinion), and then constitutes an illegitimate attempt to *create* a mixed dispute (p. 113). The assumption is: “[I]f in practice an explicit agree-

ment has not been made about the division of the burden of proof, the burden of proof rests in principle with the one who brought forward the standpoint in the confrontation stage” (p. 114).

The design is similar to that described above (48 dialogues, 32 subjects), but test elements are three-turn dialogues (claim; challenge to defend; attempt to shift). Moreover, versions of the direct attack and the *tu quoque* are included for comparison. Also the results are similar: *Shifting the BOP* receives an ARV of 2.37 (0.89) (p. 118). However, varying the three discussion contexts does not show the expected effect (p. 119). Notably, qualitative responses indicate for 75% of subjects that their wording of the committed fallacy is close to synonymous with the Pragma-dialectical version. *Evading the BOP by presenting it as self-evident* receives an ARV of 3.04 (0.72) (p. 123). In this second experiment, the discussion context effect is again robust (ARVs are: 3.45 (0.72), 3.03 (0.99), 2.63 (0.88) for the D, P, S contexts, respectively, p. 123).

Furthermore, the qualitative part of a repetition of the second experiment shows: “[B]arely 1/3 of respondents can formulate the [Pragma dialectical] rule in an explicit way, while only 5.3% of responses could be coded under politeness-considerations” (p. 126). The third experiment, geared towards *evading the BOP by personally guaranteeing it*, gives a similar result. However, it left discussion contexts unconsidered and revealed that subjects could not phrase anything coming close to an obligation-to-defend rule (p. 132). Finally, *evading the BOP by immunizing a standpoint against criticism* behaves much the same, ARV 2.93 (0.96) (p. 135). Notably:

The results of the studies imply that the obligation-to-defend rule, just as was the case with the freedom rule, does not belong to the conscious normative-critical repertoire of our respondents that can be used in an abstract generalizing sense when judging different concrete phenomenal forms of unsound moves that can be viewed as instantiations of the same abstract category. Nevertheless, (...) the respondents can in all cases clearly recognize and express where the deficient nature of the moves concerned can be traced to in an argumentative sense. (p. 137)

**2.6.** Chapter 6, *The Opening Stage: The Obligation-to-Defend (II)*, starts with a discussion of the principle of presumption (said to be enjoyed by the

*status quo*) and the principle of fairness (Slogan: Defend first what is easier to defend). The (*vis à vis* chapter 5 more complicated) study also investigates the fallacies of *evading* and *shifting the burden of proof* (BOP). Here, standpoints may (not) enjoy presumptive status, and pertain to either a mixed or a non-mixed difference of opinion (DOO) (p. 144). The expectation is that “ordinary arguers will not be insensitive to the influence of the presumptive status of a standpoint” (*ibid.*). For example, the standpoint “Smoking is bad for your health” is assumed to enjoy presumptive status, while “Children should grow up with pets” does not (p. 145).

For non-mixed DOOs three-turn, and for mixed DOOs four-turn dialogues were constructed. In the mixed DOO case, (i) *A* forwards a (non-) presumptive standpoint; (ii) *B* responds with an opposite standpoint; (iii) *A* challenges *B* to provide reasons; (iv) *B* attempts to shift the BOP to *A* (In the non-mixed case: skip (ii)). ARV-wise, and with +/-PS for (non-)presumptive status and +/- MIX for (non-)mixed DOO: +PS, -MIX 2.78 (0.85); +PS, + MIX 2.61 (0.80); -PS, -MIX 2.66 (0.80); -PS, -MIX 2.59 (0.96) (p. 148).

A remarkable result of this study is that the presumptive status of standpoints hardly influences the judgment of the respondents: It is true, in accordance with our expectations, that the respondents tend to judge the fallacies with a presumption standpoint somewhat more leniently than those without a presumption standpoint but this marginal difference appears to be insignificant. (p. 149)

This is exactly in line with the Pragma-dialectical discussion rules where arguers incur a BOP irrespective of whether standpoints enjoy presumptive status (p. 150). A replica which reduced the complexity of discourse items to two-turn dialogues confirms these results. However, it also shows:

[I]f in a discussion the burden of proof is evaded, then the respondents will deem this without hesitation to be an unreasonable discussion move – but they feel less strongly about it when this fallacy is committed by someone who has the presumption on his side. (p. 157)

For the large majority of respondents, the qualitative responses of the replica display that they based their judgment on the obligation-to-defend being violated, rather than some alternative explanation (p. 159). Especially

for *accuses* (i.e., two turn dialogues in which *A* accuses *B* of having done *x* and which continue: *A*: Prove *not x*; *B*: Prove *x*): “In more than 90% of all cases our respondents referred to the principle of *presumptio innocentiae* [gloss: a presumption of innocence holds until proven otherwise] from criminal law for their motivations” (p. 160). In contrast to the normative content of the Pragma-dialectical model:

[I]t cannot be deduced that our respondents are purely rational judges who are completely entitled the epithet *animal rationale*. In their otherwise critical considerations concerning the reasonableness or unreasonableness of discussion contributions a psychological element sneaks in that is at odds with the rules of the pragma-dialectical ideal model concerning the obligation-to-defend rule. After all, if the burden of proof is evaded by someone who has presumption on his side (...) then this evasion is found to be less reasonable by our respondents than when the burden of proof is evaded by someone who propagates a standpoint to which no presumptive status can be awarded. (p. 160)

**2.7.** Chapter 7, *The Argumentation Stage: The Argument Scheme Rule*, lists the six Pragma-dialectical rules regulating the argumentation stage (*standpoint rule, relevance rule, unexpressed premise rule, starting point rule, validity rule, argument scheme rule*; p. 164), presents examples of their violation, and the tri-partition of *symptomatic, analogy* and *causal argumentation* as well as their distinct associated soundness criteria (aka. critical questions) (p. 165f), then turns to a discussion of the *ad consequentiam* and the experimental set-up. The same occurs later in this chapter for *ad populum*, false analogy and the slippery slope.

Notably, the *ad consequentiam* is rejected as a reasonable discussion move, because “[t]he combination of a descriptive standpoint and a normative argument always leads to an inapplicable argument scheme” (p. 172). Two variants are distinguished, one in which “pragmatic argumentation is copied (...)” and another variant in which the type of reasoning called *reductio ad absurdum* is copied (...)” (*ibid.*). Moreover, a positive and a negative version are distinguished which trace “good” and “bad” consequences, respectively. Results show the (by now) expected pattern for the pragmatic variant of *ad consequentiam*, ARV 2.96 (0.70). Surprisingly, respondents

do seem to not distinguish logically valid instances of a *reductio ad absurdum* argumentation from (fallacious) *ad consequentiam* instances (p. 179). Both receive ARVs of around 4.

For the first time the respondents have judged a reasonable discussion move to be barely reasonable (in this case the *reductio ad absurdum*), and it is also the first time that the respondents reject an unreasonable discussion move as hardly unreasonable (the logical variant of the *argumentum ad consequentiam*). (p. 180)

This is ascribed “in all likelihood [to] the esoteric character of both the reasonable and unreasonable counterparts of the logical variant of the argumentum *ad consequentiam*” (p. 190). For the *ad populum*, results come “back to normal,” ARV 2.77 (0.80) (p. 184), likewise for the *slippery slope* – receiving 3.31 (0.78) (p. 185) – and false analogy at 3.14 (0.70) (p. 189).

**2.8.** Chapter 8, *The Concluding Stage: The Concluding Rule*, treats the *ad ignorantiam* and stresses that, according to Pragma-dialectics, a resolution of a difference of opinion occurs necessarily *ex concessis*, i.e., is always based on concessions incurred by the antagonist “which the protagonist can use during his defense” (p. 194). The *ad ignorantiam* fallacy then consists in mistaking a failed defense of the protagonist’s standpoint for a successful defense of the antagonist’s standpoint (or *vice versa*). As “[v]iolations of the concluding rule generally amount to no consequences or too many consequences being attached to the success of the protagonist or the success of the antagonist” (*ibid.*), a successful defense *ex concessis* may be mistaken for a demonstration that the defended standpoint is true independently of any concession.

This yields the following two specifications: (i) The protagonist (antagonist) does not retract (criticism of) a standpoint which has (not) in fact been successfully defended; (ii) she may conclude that her standpoint is true, because it (or the antagonist’s standpoint) has (not) been successfully defended. Results show an ARV of 2.56 (0.71), while “a large proportion of the respondents is quite capable of indicating exactly and accurately why the *argumentum ad ignorantiam* fails” (p. 201).

**2.9.** Chapter 9, *Conventional Validity of the Pragma-Dialectical Discus-*

*sion Rules*, summarizes and interprets the main results for the 20 fallacies investigated (table 9.1, p. 206). With respect to (i) variations in the data, (ii) the oftentimes striking inability of respondents to qualitatively motivate their quantitative judgment and their inability to discern some fallacies (either always or in some context), and (iii) the age range of respondents (mostly 15-16), results are somewhat relativized: “There is possibly still some room for doubt despite all the consistency” (p. 208).

The use of only one scale for reasonableness judgments is defended at some length, principally on the basis that objections to this choice would also pertain to a multi-dimensional measurement of, e.g., “fairness, adequacy, ethnical acceptability, relevance, persuasiveness” (p. 211). The obtained pattern in reasonableness-*differences* is stressed, the influence of individual biases admitted and the use of constructed (rather than natural/observed) dialogue items defended.

A replication with natural discourse items was conducted which “more or less leads to the same findings as our experiments using constructed, hypothetical messages, at least as far as the three variants of the *ad hominem* are concerned” (p. 219). ‘More or less’ may be motivated by the fact that reasonableness scores were, on average, higher and data more spread than for constructed items (tables 9.4 and 9.5, p. 218f.). Still, based on effect size (table 9.5, p. 223):

The final conclusion of this comprehensive research project is that the body of data collected indicates that the norms that ordinary arguers use when judging the reasonableness of discussion contributions correspond to a rather large degree with the pragma-dialectical norms for critical discussion. (p. 224)

### 3. Evaluation

This book, *a fortiori* the project on which it reports, should count as a substantial achievement. *Vis à vis* standard social science statistical methods, and provided a typical sample size of  $n = 50$ , there is little one might want to criticize.<sup>8</sup> With all reservations under which empirical results must placed,

the book's carefully optimistic tone appears fully justified. Even readers who never doubted that such results would be obtained should find value, especially in the occasional surprising result. Such "anomalies" are promising leads to future research, especially on cultural differences in argumentation.

Though likely perceived as less valuable, one might copy the methods presented here and apply them to the Pragma-dialectical rules the conventional validity of which has not been investigated. After all, the study establishes that *four out of ten* Pragma-dialectical rules (freedom, obligation to defend, argumentation scheme, and concluding rule) are conventionally valid to a rather large extent – not more, not less.

This book is a true resource, irrespective of one's theoretical orientation. Rich in examples and charts, it also provides excellent teaching material. Didactically, the presentation of the Pragma-dialectical approach in application to test items appears (to me) to improve over a "theoretical" exposition. Conversely, and perhaps with the exception of a clear, albeit brief statement on the 'is-ought problem' (*naturalistic fallacy*) (p. 27, see Section 2.1), the theoretically inclined reader might find little that is new to her.

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