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Jonathan E. Adler Brooklyn College and the Graduate School

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# Distortion and Excluded Middles\*

## JONATHAN E. ADLER

Department of Philosophy Brooklyn College and the Graduate School, CUNY USA jadler@brooklyn.cuny.edu

ABSTRACT: Why is there so much distortion in ordinary, political, social, and ethical argument? Since we have a pervasive interest in reasoning well and corresponding abilities, the extent of distortion invites explanation. The leading candidates are the need to economize, widespread, fallacious heuristics or assumptions, and self-defensive biases. I argue that these are not sufficient. An additional force is the intellectual pressure generated by acceptance of norms of conversation and argument, which exclude 'middles' of, prominently, neither accept (believe) nor reject (disbelieve). I conjecture that the distortion we find is due to intellectual and normative pressures generated by our commitment to these *excluded-middle* norms and if, or when, their force is lessened, there is likely to be less distortion.

KEYWORDS: argument, distortion, law of excluded middle, excluded middle norms, cognitive dissonance.

1.

Distortion in the expression or understanding of others' arguments I take to be sustained underestimation by misrepresentation, not merely a one-shot lapse. Even when we observe only brief instances of distortion, a vivid and typical enough instance can supply good evidence of a pattern of misrepresentation. Since I concentrate on sincere distortion, where the distorter is taken in, it will not be intended. Still, distortion involves intellectual negligence or irresponsibility, primarily by the biased selection of sources, where one has available alternatives.

The means of distortion individually or in combination are familiar: simple dismissal, without real evaluation, emphasis, as in my example, on weaknesses in inessential or minor premises (see Republic 338d), fallacies 'ad', genetic fallacies, and disparagement by innuendo, sarcasm, ridicule, etc, and related strawman fallacies. There is also simplifications that put the argument in a poorer light than is obviously available, even when some simplification is necessary due to space limitations or to render the content accessible and engaging for a broad audience.

We should be puzzled by the extent of distortion. We value good reasoning and argument. We must be competent in their use, otherwise our rudimentary reasoning would not work so well. These are primary sources for the acquisition of new information and the modifications of our beliefs, whose truth we depend on for successful actions.

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How do we explain then the generation, large degree of toleration, and even the acceptance, of so much distorted argument?

Though we should be puzzled or surprised by the extent of distortion—so that we should take it to call for explanation—I doubt that anyone is puzzled or surprised. First, it is difficult to be surprised with what you expect, almost a commonplace. Second, we are familiar with a variety of very plausible explanations for the extent and persistence of distortion. Motivational sources, as well as psychological means, of distortion include: self-defensive biases; belief conservatism; self-interested motivation to persuade; common fallacies, faulty assumptions and weaknesses in reasoning; limited possibilities for falsification (discovering that one is wrong); 'groupthink'; and the need to economize. Although I think these explanations go far to explain the motivations and workings of distortion, and I draw upon them, there remains a missing ingredient.

The missing ingredient I hypothesize are *norms to exclude 'middles' of no firm judgment*. An excluded middle norm to govern argumentation would bar a hearer or interlocutor from neither acceptance nor rejection of an argument presented to him. The norm I call "refute-or-accept" holds that if a hearer or interlocutor cannot refute an argument presented to him, he represents himself as accepting it.<sup>1</sup> (For reasons of space, I'll largely ignore the important qualification 'represents himself'). This norm excludes the middle of non-acceptance despite a failure to refute.

Most space in this paper is devoted to introducing the hypothesis----clarifying the nature of excluded-middle norms while taking normativity for granted; exhibiting and explaining their range of application. At the end, and then only briefly, I advance the hypothesis merely as worth pursuing, a pursuit which down the road requires much empirical testing. I know of no actual tests.<sup>2</sup>

The hypothesis naturally divides in two: The missing ingredient is actually involved in distortion; and absent the missing ingredient, distortion would diminish. For purposes of this paper, I need claim only that we do, or think that we should, conform to these norms, and, in fact, most of the reasons I offer are reasons not to endorse these norms.

#### 2.

In this section, I'll offer some examples of excluded-middle norms (or excluded-middle circumstances). The domains where these norms or circumstances hold are ones where,

<sup>&</sup>lt;sup>1</sup>. I critically discuss, qualify, and defend this norm at length in "Resisting the force of argument" (unpublished).

 $<sup>^2</sup>$ . For such tests in the realm of choice with lots of citations to related empirical work: Dhar and Simonson (2003) Here's an obvious proposal to apply to argument exchanges. Divide subjects randomly. Both groups will read extended argumentative passages, related to positions for which their own position is stated or known. One group is told that they must evaluate the arguments, as cogent or not. The other group is divided further: they are to evaluate the argument, and they can come to a judgment that is pro, con, or a weighted judgment (pretty good..); the other group is told they can pass on evaluating the argument. Subsequently each subject is asked (the material is surrendered) to summarize the argument.

One problem: the 3<sup>rd</sup> (and crucial) group, who can pass-they must be provided with some other task to keep the situations comparable. But what task will allow indifference to be indifference and yet not force them close to an excluded middle?

to speak figuratively, silence, is assent or taken as assent; omission, effectively commission. Next, I'll offer clarification of role of excluded-middle norms to exclude 'middles' that cannot be logically excluded. In the following section, I raise and try to allay some doubts about whether epistemic excluded-middle norms are rational to believe or to adopt. Finally, and briefly, I turn to the main task of developing the hypothesis that these norms play a role in distortion.

A closely related norm to refute-or-accept is implied by 'how else' explanatory challenges, whereby unless you can offer an alternative or better explanation for a surprising or puzzling phenomena than the challenger, you are taken to be duty bound to accept his.<sup>3</sup> In his 12.2005 column in *Scientific American*, Michael Schermer ("Mr.Skeptic Goes to Esalen") writes, "Once it become known that Mr. Skeptic was there, for example, I heard one after another 'How do you explain *this*?" story, mostly involving angels, aliens, and the usual paranormal fare." (p.38). The 'how else' move is an assumed premise in conspiracy theory presentations as well. As a challenge, though, it is susceptible to the Lockean objection noted below.

In the next section I discuss excluded-middle confusions or fallacies of withholding belief with disbelief. That confusion is facilitated by norms for belief that mandate that it take on an all-or-nothing form for many beliefs, even about complex or controversial issues, rather than holding them to a certain degree.<sup>4</sup> Grounds in support of our holding beliefs mainly in full or all-or-nothing form derives from introspection and considerations of economy. We cannot operate with, or hold on to, numerous beliefs as matters of degree. It would render enormously complex and burdensome the regular inference from beliefs (and desires) to action.

Evidence that we do, in fact, hold beliefs on opinionated, complex matters in this way comes from Deanna Kuhn's (1991) research. She examines argumentation among ordinary citizens about three topics: "What causes prisoners to return to crime after they're released?" "What causes children to fail in school?" and "What causes unemployment?" (1991, 16). Despite these questions eliciting a large range of possible causal explanations from subjects, many of which blatantly call for research, she observes:

All but a few participants quite readily offer their views on the topics they are asked about and exhibit little difficulty in expressing themselves.(1991, 21-22; for qualifications on her findings, see Brem and Rips 2000)

Various dialogue models impose excluded-middle norms with little or no comment, and they would not deserve comment were their models to be limited purely to dialogue games. A participant acquires a burden of proof, which, if not met, concedes the claims or arguments of another. (See, for example, van Eemeren and Grootendorst 1984 p.18. and Rule 17 p. 174; and Rescher 1977 p.44.) Walton and Krabbe (1995) comment "unchallenged assertions count as conceded. We do not see any reason to admit a middle

<sup>&</sup>lt;sup>3</sup> Sober (2001) rejects related reasoning which he calls the "Only game in town" fallacy 33-34

<sup>&</sup>lt;sup>4</sup> Conversationally, except in unusual circumstances, it is not of informational value to introduce that you do not hold a belief, since this is true of a vast number of propositions. It is expected. A lack of belief becomes informative in <u>denying</u> an assertion that expresses someone's belief. See further Adler (2000).

position." (p.137) Now Walton and Krabbe formulate this condition very weakly, and much more weakly than refute-or-accept. They continue:

If you not want to concede something, just challenge it. That would only mean that you are prepared to hear your opponent's reasons. (137)

Still, their norm generates a default that places the burden of non-acceptance on the interlocutor, not the arguer (proponent). The proponent only has to say 'I challenge', however. But if the challenge requires no reasons, just a blank utterance, it does not fit with the challenge structure of ordinary conversation. By imposing a burden on the challenger (to show that his challenge is not e.g. a mere sceptical one), a regress of justification or reason-demanding is blocked. Without the burden for a reason, the interlocutor has a free ride to challenge all claims of the proponent, including standardly conceded factual claims, and it dissolves the reciprocal obligations of the interlocutor to the arguer.

The imposition of these rules or norms is remarkable, whether in the stronger or weaker forms, because these authors, I assume, aspire to have their models represent the structure of real dialogues or argument exchanges. The endpoint is acceptance as belief, not only an action or a move in a game, which requires a prior commitment to participate and (try to) win. Excluding certain ways of acting is a far cry conceptually from excluding, or trying to exclude, certain options for believing that is crucial for generating the intellectual pressure implied by my hypothesis.

Social norms of civility, courtesy, and the like exclude one's unresponsive reaction to the overtures of another, regardless of what one thinks. If someone invites you to a dinner, you are obliged to return the call. You ought to respond positively or decline (with apologies), eliminating the option of not responding or delaying a response (without special reason).

We are acclimated to such norms. We hardly notice them, yet they powerfully constrain our available responses. These norms offer the benefit of removing a burden of deliberation and decision by dictating the by-and-large correct social response. These norms, recall, arise with little or no conscious decision or teaching, as, presumably, solutions to manifest coordination problems.

These norms fall under the very broad category of default norms or default reasoning. Default reasoning moves a process forward, unless there is intervention, rather than requiring a command. This is extremely economical and so helpful—when you do not tell your computer where to save a file, it default–automatically–saves it to the drive you are working on. It eliminates—excludes—the possibility of not saving it at all, unless you intervene and decide. Gricean conversational reasoning works via defaults. If you assert a weak statement like 'some students came to the party', when you are mutually believe to be in a position to know how many came, then by default, you implicate that 'not all the students came to the party'. Excluded-middle norms as defaults dictate that when you do not object to an assertion, you are default represented as accepting it. Thereby the possibility of no response or suspension of judgment by you is burdened with requiring a special reason.

### 3.

These excluded-middle norms exclude what is not logically excludable. The law of excluded middle (LEM) is that for any proposition p, either p is true or not-p is true. The negation is a full or external negation, generating a contradictory, not a contrary. Either John is rich or John is poor is not an instance of LEM. It leaves open the 'middle' that John is neither rich nor poor.

Once one introduces an operator, like a modal, on a proposition, there is no longer an instance of LEM. An instance of LEM for belief is:

for every proposition *p*, either X believes that *p* or X does not believe that *p*.

But it is not an instance of LEM that

for every proposition p, either X believes that p or X believes that not-p. (Adler 2000)

Yet, treating the latter as an instance of the former is a common fallacy.

What an excluded-middle norm excludes divides into two. The more familiar middle is 'suspension of judgment', which is to claim that the evidence or reasons do not favor a definite position. When one's evaluation ends in a suspension of judgment, one is in a position to hold a favorable degree of belief in accord with the balance of the evidence.

The one who suspends judgment has a weaker burden than one who comes to a definite pro or con conclusion. The suspender only has to show that the evidence is indecisive, for which it is enough that further investigation and open questions remain. He grants himself latitude to achieve greater certainty, which is available for most any serious or complex or controversial position. Our agnostic can draw upon the criticisms that each definite pro/or con position enters of the other. Still, though suspending judgment, he participates to the extent of putting forth some claim for which a justification can be demanded.

The alternative to suspension of judgment that is still within the 'middle' is simply indifference; entering no claim at all. Just as we hold no beliefs on a vast number of propositions, so too are we are indifferent to a vast number. Logically or conceptually, silence could be just that: non-agreement or non-interest in response to the option, not a denial. Suspension of judgment is often warranted on purely evidential grounds. Indifference needs no warrant or grounds, beyond, perhaps, the standing conditions of our finiteness, free will, and multiple interests.

4.

Given that excluded-middles are never logically excludable and that excluded-middle norms place a heavy burden on participants by restricting their options, why accept that they are epistemically normative? Wouldn't such norms fail to be rational to endorse, even if we unfortunately come to believe in them? With norms of civility, a need for coordination, shared expectations, and social harmony motivates their adoption. But acceptance of an argument as cogent issues in belief in the conclusion. How could it be rational to adopt a norm which excludes an option that can fit the circumstances, more specifically, the evidence? Why do we even need excluded-middle epistemic norms, over and above civility norms to govern our social interaction in argumentation and the like? Our interest in truth and our correlative responsiveness to reasons is sufficient to move us to a decisive judgment, as the evidence or argument allows.

A line of argument, already hinted at, favoring excluded-middle norms as epistemic starts off from an insight found in James' (1951) failed argument for the 'will to believe'. (Adler 2002 Ch. 4.) Although James explicitly attempted to distance his 'will to believe' argument from Pascal and his wager, he takes over a key premise : 'Yes; but you must wager' (Pascal 2005 p. 212) The form it takes for James is that the choice to believe or not is, effectively, a forced option.

But James recognized that the choice of belief or disbelief is not logically an instance of LEM. His claim is that in matters essentially not settled by evidence, which are of importance to one's life, the option of no decision is not practically different from deciding-not, and so one is in a forced choice to accept faith or reject it (at will). Agnosticism is assimilated to atheism because in the former case one still does not partake of those religious activities requiring faith, which is a necessary condition for discovering whether religious beliefs are true.

A broad set of cases that fit within James' reasoning are of the need or essential value for argument, reasoning, and conversation of full beliefs, rather than degrees of belief (the agnostic's suspension of judgment). These practices or patterns of thought cannot be engaged, or they would be overburdened, without many beliefs that are full or all-or-nothing beliefs. You are typically inspired to engage with someone who claims that the US should impose a military draft, not someone who believes it is only probable or improbable, which is not to take a stance. (The argument suggested here is developed in my 2002 Ch.9; and 2006.)

The rationale for excluding a middle of suspension of judgment is more forceful for excluding indifference. Epistemic practices like argumentation cannot work if indifference is always a free, open middle. The possibility, not even the actuality, of indifference as a live option threatens epistemic practices like argument and their coordinative expectation of uptake and correlative response. Excluded middle norms enforce participation, including the epistemically valuable demand for explicitization of one's reasons.

Consider, by contrast, settings in which such a 'middle' is wide open. You examine some shirts in a department store, and just walk away. If a salesperson asks you 'can I help?' any number of casual responses are available; most usually, I assume, 'No, just looking.' There is slight or no discomfort. You do not even have to explain to the salesperson why. It would be offensive or off-putting for the salesperson to request your reason for not purchasing anything. Of course, salespersons are often so willing to offend and discomfort. They will succeed if the buyer (mistakenly, but understandably) believes that he should have a reason or justification for not purchasing the product. However, there is no norm here, beyond that of civility and courtesy, which is now abused. No demand for reasons or justification is appropriate.

If refute-or-accept governs, a hearer or interlocutor is bound to participate since his lack of refutation amounts to a representation of himself as accepting. If, when

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presented with an argument, one can simply respond 'Thanks, I'll think about it', the exchange is aborted, which is particularly unsatisfactory for the arguer. He has offered grounds that purport to establish a conclusion, and he has taken it that the hearer or interlocutor will respond accordingly, as the interlocutor represented himself both as competent to judge and as a participant. In assuming that the interlocutor is not holding up his reciprocal duties to reach a verdict of either acceptance or a reasoned refutation, the arguer is presupposing that some excluded-middle norm, like refute-or-accept, governs.

#### 5.

We are now positioned to converge on the specifics of my hypothesis. Excluded middle norms govern reason-giving/reason-requesting settings and what they exclude is sometimes a position one should (or must) take. Excluded-middle norms impose an enormous burden on the hearer and renders him vulnerable to false persuasion as suggested by Locke's objection to the *ad ignorantium*: "It proves not another man to be in the right way, nor that I ought to take the same with him, because I know not a better." (Locke 1975 Book IV Ch. XVII section 20)

Locke's objection requires qualification on the scope or reach or domain of excluded-middle norms (as believed or as normative), but not wholesale rejection. If so, then a hearer or interlocutor regularly faces a conflict when he cannot live up to the demands that he endorses for reasons, justification, refutation or articulate defense, and yet one cannot simply accept the arguer's conclusion. Acceptance as belief cannot, in any case, strictly obey excluded-middle norms, as shown by your (inarticulate) resistance to e.g., a well versed Kennedy conspiracy theory presented to you.

For a more developed and moderate example, imagine that you meet someone who presents you with a powerful argument against a longstanding position that you are strongly committed to, but for which you have not thought about for a while e.g. that capital punishment is a permissible punishment. His argument seems a good one, and, though you have reasons for dissent here and there on small points, you recognize that you cannot come close to refuting the argument. Now I think at this juncture you will feel strong discomfort, as well as normative and social pressure: the arguer presses you that if you cannot refute his argument, you should accept it. This is the intellectual pressure and first-personal conflict that I take to be a missing ingredient in understanding the prevalence of distortion, with confabulation as an illustration.

In the absence of an excluded middle norm the intellectual pressure would greatly diminish, especially when one holds a contrary or opposed position. The explanations for distortion canvassed above would lose their grip. Why the effort to distort or to self-deceive, if one can just be respectfully indifferent, as you are in the department store? The further, complimentary, conjecture is that given the pressure, distortion is motivated as a way to remove intellectual discomfort, if one cannot meet the pressure rationally by straightforward refutation or articulation of cogent reasons.

Compare this pressure to our susceptibility to the car salesman's pressure to accept or to explain why you reject a 'deal' he offers. You judge the deal to be the best for the car you are interested in. However, you did not intend to buy now, though you did 'your homework'. The pressure to buy is accompanied by puzzlement, since you sense

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something is wrong, given your knowledge of the salesman's motives and how much better skilled he is at selling than you are at buying. Yet there does not seem to be an opening to enter these as reasons pro or con buying the car (i.e. excluding the middle of simply not-buying). The deal is right before you. You represent yourself as competent to judge it, as he treats you by his presentation and his willingness to answer your questions. The final decision is yours. So there will be internal-intellectual pressure, even if you do not then agree to the deal. Your acquiescence or endorsement of the excluded-middle norm to buy-or-to-explain-why-not presses you to articulate a justification for your nonacceptance. Your grounds for resistance to the 'deal' may not be accessible to you or they may fall flat in the circumstances ('I have a policy of never agreeing to a deal on the spot')

The bind generates pressure that seeks relief in distortion, and it is at this juncture that the hypothesis engages with the psychological accounts. The psychological generalization that is the model for resolving the pressure by credulity (or credulous dissent) derives from cognitive dissonance and related research:

If a significant rule or norm or practice, which one endorses, enjoins A (an excluded middle norm like refute or accept), and believing that  $\mathbf{p}$  would lead one to recognize (admit) that one's act had freely violated A (neither refuted nor accepted), and there is a call to justify one's act, then there is an internal discomfort ("dissonance arousal") that generates internal pressure ("dissonance motivation") to a contrary belief (e.g., that one had actually refuted; that the argument is cogent), and thereby not to believe that  $\mathbf{p}$ , if this can be accomplished easily, outside of self-awareness.<sup>5</sup>

Excluded-middle norms – refute-or-accept; believe or disbelieve (all or nothing); provide sufficient reasons for one's judgment or admit one's failure of normal self-knowledge – demand a difficult achievement, as a condition on non-acceptance. An interlocutor might not be able to meet that demand, which, given the perceived violation of the applicable norm, generates cognitive dissonance under the above generalization.

The dissonance is especially pressing with excluded middle norms because these norms force one to a judgment, which would often be premature if one clearly had the option of no choice. Commitment to a decision is the greater if the decision (judgment) is viewed as freely made. Excluded middle norms in operation do–more strongly, can – not appear to be imposing forced choices. We retain an illusion of complete freedom, as a consequence of how we must represent ourselves (as judging freely).

In the case of the car salesman, when you reject his offer, you walk out discomforted, which discomfort you can relieve by coming to think the deal was worse than you then judged. Or, if you do accept his offer, to relieve the pressure, you (non-consciously) seek ways to view the deal as even better e.g. you focus only on ads for the

<sup>&</sup>lt;sup>5</sup> As far as I know there is no formulation of dissonance theory as a generalization, so the proposal here is speculative and certainly at best a rough approximation.. The complexities of the issue is evident in a Cooper and Fazio's 1984 review essay. On the role of no-choice options or forced choice (and the illusion of freedom) in a cognitive dissonance framework studies for consumer choices see Festinger (1964)

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car.<sup>6</sup> (Contrast your position with a 'shopper' who is near-by, and overhears the offer, but who is not directly involved with the salesman, and thus feels little of your pressure. Yet, the deal is the same for each. The hypothesis predicts that the overhearer is far less likely to confabulate or distort.)

The alternatives to the opposed distortions of dismissive underestimation or credulous overestimation is to tolerate intellectual discomfort or dissonance with one's lack of a fully satisfactory answer to oneself or to one's interlocutor for one's resistance to belief.

The intellectual pressure that results from a failure to follow an excluded-middle norm, like refute-or-accept, when one judges it applicable and yet that one cannot live up to it can be unpacked further. First, there is a normative pressure toward believing the arguer (e.g., the car salesman), despite belief resistance. In some way, you think the salesman is imposing a rightful demand. Second, if you discover that you were falsely persuaded, you blame yourself (that you were complicitous, rather than erring innocently or helplessly). Obviously, in the case of the car salesman, you agreed to the deal, and you had opportunity to investigate and to ask questions, even if under time constraints. Third, and perplexing in light of the second characteristic, you also take yourself to have done no wrong (or less wrong than that for which you blame yourself). You were not able to find a flaw in his deal, so you are duty-bound to accept it. For the rules or norms of argumentation, as well as the practice itself, are non-optional in our social and epistemic lives. The credulity at stake is of false persuasion rather than lies (or illusions) because with lies (or illusions) one is helpless, but here one has been presented with the relevant reasons (the 'deal') and the opportunity to ask questions.

These three features are those of a distinctive credulity. Because the credulity is broad in scope and ineliminable, as normative over central practices, it exhibits key features that we want for an explanation of the persistence and extent of distortion. It seems to hook on to a weakness we suffer, even if we can learn to mitigate or to overcome it The persistence would otherwise be surprising given that we do not want to be credulous. The bind arises from the seemingly innocent act of participation in an exchange. The exchange appears to leave it wide open how one responds, partly a reflection on how the hearer or interlocutor represents himself, as responding free of any constraints such as those of excluded-middle norms. But his actual normative circumstances constrain him from the vast middle options. Since there is no recognition, while participating, in the role of these norms, the distortion cannot appear as such to the distorter. Thus the pressure toward distortion is compatible with the distorter maintaining sincerity and a facade of innocence, which are other key features sought for an explanation.

link to commentary

<sup>&</sup>lt;sup>6</sup> In choice situations, consumers determine their selections by anticipatory regret, since some alternatives have to be foregone. Since there is more to regret in opting for an opposed position that fails, rather than sticking to one's own, the resolution would favor the argument closest to one's antecedent view.

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#### REFERENCES

- Adler, J.E. (2000). Belief and negation. Informal Logic, 20, 207-222
- Adler, J.E. (2002). Belief's Own Ethics. Cambridge: The MIT Press.
- Adler, J.E. (2004). Shedding dialectical tiers: A social-epistemic view. Argumentation, 18, 279-293.
- Adler, J.E. (2006). Confidence in argument. Canadian Journal of Philosophy, 36, 225-258.
- Brem, S.K. and Rips, L.J. (2000). Explanation and evidence in informal argument. *Cognitive Science*, 24, 573-604.
- Cooper, J. and Fazio, R.H. (1984). A new look at dissonance theory. In: J. Cooper and R.H. Fazio (Eds.), Advances in Experimental Social Psychology 17 (pp. 229-26) New York: Academic Press, Inc.
- Dhar, R. and Simonson, I. (2003). The effect of forced choice on choice. *Journal of Marketing Research*, 40, 146-160.
- Festinger. L. (1964). Conflict, Decision, and Dissonance. Stanford: Stanford University Press.
- Gazzaninga, M. (1998). The Mind's Past. Berkeley, CA: University of California Press.
- Holton, R. (2006). The act of choice. Philosophers' Imprint, 6, 1-15. <www.philosophersimprint/ 006003>
- James, W. (1951). The will to believe. In A. Castelli (Ed.), *Essays on Pragmatism* (pp. 88-109). New York: Harner Publishing Co.
- Kuhn, D. (1991). The Skills of Argument. New York: Cambridge University Press.
- Locke, J. (1975). An Essay Concerning Human Understanding, P.H. Nidditch (Ed.). Oxford: Oxford University Press.
- Nisbett, R. and Ross, L. (1980). *Human Inference: Strategies and Shortcomings of Social Judgment* Englewood Cliff, NJ: Prentice Hall, Inc.
- Nisbett, R.E. and Wilson, T.D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review*, 84, 231-259.
- Pascal, B. (2005) Pensées, R. Ariew (Ed.) (Trans.). Indianapolis: Hackett.
- Rescher, N. (1977). *Dialectics: A Controversy-Oriented Approach to the Theory of Knowledge* Albany, NY: State University Of New York.
- Sober, E. (2001). Core Questions in Philosophy 3rd ed. New Jersey: Prentice-Hall.
- Stanovich, K. (2004). The Robot's Rebellion. Chicago: University of Chicago Press.
- Sunstein, C.R., 2003, Why Societies Need Dissent, Cambridge: Harvard University Press.
- van Eemeren, F.H. and Grootendorst, R. (1984). Speech Acts in Argumentative Discussions. Dordrecht: Foris.
- Walton, D. and Krabbe, E. (1995). Commitment in Dialogue Albany, NY: SUNY Press.
- Wilson, T. (2002). *Strangers to Ourselves: Discovering the Adaptive Unconscious*. Cambridge: Harvard University Press.
- Woods, J. and Walton, D. (1978). The fallacy of 'ad ignorantiam'. Dialectica, 32, 87-99.