University of Windsor

Scholarship at UWindsor

OSSA Conference Archive

OSSA 7

Jun 6th, 9:00 AM - Jun 9th, 5:00 PM

Bi-Logic and Multi-Modal Argumentation: Understanding **Emotional Arguments**

Claudio Duran York University

Follow this and additional works at: https://scholar.uwindsor.ca/ossaarchive



Part of the Philosophy Commons

Duran, Claudio, "Bi-Logic and Multi-Modal Argumentation: Understanding Emotional Arguments" (2007). OSSA Conference Archive. 35.

https://scholar.uwindsor.ca/ossaarchive/OSSA7/papersandcommentaries/35

This Paper is brought to you for free and open access by the Conferences and Conference Proceedings at Scholarship at UWindsor. It has been accepted for inclusion in OSSA Conference Archive by an authorized conference organizer of Scholarship at UWindsor. For more information, please contact scholarship@uwindsor.ca.

Bi-Logic and Multi-Modal Argumentation: Understanding Emotional Arguments

CLAUDIO DURAN

School of Social Sciences York University Toronto, Ontario Canada M1N 2T1 cduran@yorku.ca

ABSTRACT: According to Bi-logic theory, there are two logics operating in the mind. One is traditional logic, and the other one is called "symmetrical", because it does not respect asymmetrical relations. Bi-logic assumes that mental processes involve combinations of both logics in different proportions. From that perspective, Michael Gilbert's theory of Multi-Modal argumentation is discussed focusing upon emotional arguments. It is claimed that these arguments are bi-logical, that is, they contain a combination of traditional and symmetrical logics.

KEW WORDS: bi-logic, emotional arguments, multi-modal argumentation, principle of symmetry, symmetrical logic.

Once we stop thinking of arguing about emotions as inherently different from arguing about anything else, the path to understanding them, creating models and moving forward becomes manageable. (Gilbert, 2002)

My training was originally in the symbolic interactionist social psychology of George Herbert Mead (1934) and, later, in psychoanalysis. For the former, emotion and cognition are inextricably linked, for once we've entered the domain of symbolic functioning, emotions are based on what W.I. Thomas called our *definition of the situation*. Although Freud's theory of affects remained vague and undeveloped, for me at least, psychoanalytic practice confirms the Meadian view. (Carveth, 2005)

In introducing the theory of Bi-Logic, it is necessary to say a few things about Freud's concept of the unconscious as Matte-Blanco, the author of this theory, relates his main ideas to the Freudian concept. In several of his most important writings, Freud (1984, 1973, 1983) mentions a few characteristics of the unconscious, which do relate closely to a certain degree of logical elaboration. Firstly, in the unconscious there is no respect for the principle of non-contradiction, that is, contradictory statements can exist side by side. Secondly, in the unconscious there are no negations. Thirdly, in the unconscious items that are similar tend to be identified in what Freud calls condensation. Then, in the unconscious, items can be displaced to other similar items, losing their own identity. In addition, Freud says that in the unconscious there is no respect for the rules of logic. Finally, he elaborates that logical relations are treated differently by the unconscious, and

Duran, C. (2007). Bi-logic and multi-modal argumentation: Understanding emotional arguments. In H.V. Hansen, et. al. (Eds.), *Dissensus and the Search for Common Ground*, CD-ROM (pp. 1-9). Windsor, ON: OSSA.

Copyright © 2007, the author.

he claims, in this respect, that logical connections are reproduced in dreams by simultaneity in time; he also refers to causal relations and the either/or alternative as they are reproduced in dreams. However, Freud never conceived of the possibility that those features of the unconscious could be the expression of another 'logic' operating in the mind. Matte-Blanco undertook this task very early on in his work as a psychoanalyst. He dedicated a good deal of his time to the study of logic and mathematics in order to be able to develop such alternative logic.

Matte-Blanco introduced his ideas on Bi-Logic in a systematic and developed way with the publication of his book (Matte-Blanco, 1975) *The Unconscious as Infinite Sets. An Essay in Bi-Logic*. There are two main issues that are needed in order to characterize the core of his ideas on the existence of another logic in the mind: one is set theory and the other is the concept of relation, and specifically one of the properties of relations called symmetrical/asymmetrical. As is well known, a relation is called symmetrical when the relation can be reversed, and asymmetrical when it cannot. Thus, a=b is a symmetrical relation for the relation is maintained if we reverse it and say b=a; whereas a relation is called asymmetrical if it cannot be reversed, such as in the case of a>b. In essence, Matte-Blanco believes that, based on those two issues, it is possible to systematize Freud's proto-logical ideas on the unconscious. For, according to Matte-Blanco, in the unconscious there is no respect for asymmetrical relations, and then all relations tend to be treated as symmetrical. In this sense, he says that the unconscious is rather regulated by what he calls the Principle of Symmetry (PS).

Based on this principle, Matte-Blanco attempts to reformulate the Freudian unconscious, by first explaining the several logical points of Freud that I introduced above. This is a matter of specific interest for psychoanalysts, so I am going to focus rather on the constitution of another logic. Secondly, Matte-Blanco describes the logical consequences if the Principle of Symmetry is applied:

- 1) If the PS is applied then the part becomes identical to the whole. The reason for this identification is that if 'p' is part of the whole 'W', then applying the PS, 'W' is part of 'p'. This takes us to identify part 'p' and whole 'W'. Moreover, the same would happen to each part of this whole with the consequence that all the parts of a whole are identical to the whole and to each other.
- 2) If the PS is applied then the members of a set are identical to the set and to each other. Similarly to the above explanation, if 'm' is a member of the set 'S', then applying the PS, 'S' is a member of 'm'. The same would happen to each member of the set and thus, they would be identical to each other and the set. The same can be said of subsets as related to sets.
- 3) If the PS is applied then there are no negations. For if the set of affirmative propositions is a subset of the set of propositions, and then applying the PS, the set of propositions is a subset of the set of affirmative propositions. The same would apply to the subset of negative propositions with the consequence that this set would be identical to the set of affirmative propositions.
- 4) If the PS is applied then there are no contradictions. The reason relates closely to the previous consequence of the application of the PS: since the affirmative and negative propositions are identical to each other there cannot be contradictions.

Now, if we take seriously the (possible) existence of a PS and its consequences as described above, and then certainly we would be in the realm of another 'logic'. Consider the following argument: The body is contained within the heart because it is clear that the heart is contained within the body. This logic is called by Matte-Blanco "symmetrical" logic. It refers to the sequence of propositions that results from applying the PS to a given piece of quite acceptable traditional logic. Notice, therefore, that symmetrical logic appears in the propositional sequences of traditional logic whenever the PS makes itself present in its midst. In essence, then, this logic assumes traditional logic as operating all the time. On the other hand, it should be said that traditional logic assumes that symmetrical logic is operating all the time. Another important point about bi-logic here is that it is necessary to understand our thinking processes as being combinations of traditional logic and symmetrical logic, in different proportion, depending on the level of depth of the appearance of symmetry. Thus, in a mathematical theorem the level of traditional logic is very high and the level of symmetry very low, whereas in a psychotic piece of reasoning, such as the above example of the heart and body relation, the opposite happens. In reality, our thinking processes would be classified as happening between two polar extremes: pure traditional logic and pure symmetry, both of them, of course, impossible to achieve. It is possible to say, therefore, that there are many levels of symmetrical depth.

If we accept these assumptions, it is possible to understand perhaps the existence of what in western thinking has been characterized as 'irrational'. It would be seen as the appearance of deeper levels of symmetry in propositional sequences or discourses. I am now going to draw an example from my main area of research (ideology, propaganda and argumentation in the mass media) in order to illustrate symmetrical logic.

In Leni Riefenstahl's documentary "The Triumph of the Will", which portrays the 1934 Nazi rally in Nuremberg, in the last section, after Hitler has delivered the closing speech, and after a long sequence of deeply felt emotional responses by the audience to the speech, R. Hess turns to the Fuhrer, and with the right arm extended in the typical Nazi salute, he utters the following (according to the translation in Deutschmann, 1991):

"The Party is Hitler, as Hitler is Germany and Germany is Hitler."

Thus, Hitler is identified with the whole of the party and the whole of Germany: it is possible then to interpret this set of statements as being the expression of the application of the PS. The part of the whole party (Hitler) is identified with the party itself as a whole. Then the part (Hitler) is identified with the whole country (Germany). All this shows an identification of parts and wholes:

Hitler= Nazi Party=Germany

It is possible, further, to say that this is the expression of deeply felt emotional needs of the members of the party, and of its leaders. One could perfectly say that this is the expression of sheer irrationality. However, the PS makes it possible to claim that there are profound human realities involved here, and one could miss them if one remains at the level of that assessment. I will come back to this issue below.

In such set of identities one can detect a deep level of symmetry, much more that if one says, for example, 'it feels as if Hitler is the Party and Germany', which would indicate rather an understandable metaphorical connection.

The issue for a bi-logical interpretation at this stage is the following: it is possible to perceive here that Hess' set of statements relates to a profound expression of emotions. Thus, one could claim that deep levels of symmetry seem to relate to deep emotional expressions, or conversely, that deep emotions relate to deep levels of symmetry. Thus, at this stage it is necessary to understand the bi-logical understanding of emotions.

We can appreciate the significance that Matte-Blanco attributes to emotions in the following quote (Matte-Blanco 1975, page 15):

I hope the present approach may not only be of interest to analysts but also offer at the same time the possibility of new forms of dialogue between psycho-analysis and philosophy, mathematics, logic, moral philosophy, anthropology and sociology. All these disciplines have contributed to its shaping; perhaps the formulation put forward here, in its turn, will pay back to them, in a psychological form, something of its debt to them. At the same time psycho-analysis could become the link between the inevitable regimentation of modern civilization and the unforeseeable freshness of emotion. There is no other discipline which is both scientific and moves in the realm of emotion and, hence, of art and also, in part, of ethics, sociology and politics: in short, of the humanistic side of man, because it deals simultaneously with the duality unconscious-conscious or symmetrical-asymmetrical.

Matte-Blanco undertakes a bi-logical interpretation of emotions in Part VI of this book. It is a detailed and extensive examination of the topic. I will refer now to some relevant ideas for our purpose in this presentation. According to Matte-Blanco, emotion is a psycho-physical phenomenon and his focus is on the psychological aspect of emotion, which, in this sense, has two components: sensation-feeling and thinking. The fundamental issue for him is here the thinking aspect of emotion, which he characterizes as emotional thinking, and he refers to this as a type of thinking that is inherent in emotion (Matte-Blanco 1975, page 247):

Starting from the recognition that propositional activity (establishment of relations) is not a concomitant of feeling but an integral part of it, we have begun to see that many questions so far obscure, and in fact insoluble, could become the subject of a precise study.

Thus, it is possible to claim that (same page): "the propositional activity implicit in emotion is quite different from that to which we are accustomed in thinking."

He concludes (same page): "the type of thinking observed in emotion is what we may call symmetrical thinking".

We should be able now, I think, to say, that according to this view indeed emotion is an affective phenomenon but it does inherently involve propositional activity. This one is not simply an added component: it is an integral part of emotion. That is to say, the thinking that appears in emotion is an inherent part of it.

The Western philosophical tradition, which has deeply influenced logic, science, education and everyday life, tends to characterize argument as part of a logical flow of argumentation. As is well known, in English there is an ambiguity in the use of the term. See for example what informal logician Morris Engel says in his book *With Good Reason* (2000, pp. 7-8):

Logic is the study of *argument*. As used in this sense, the word means not a quarrel (as when we "get into an argument") but a piece of reasoning in which one or more statements are offered as support for some other statement. The statement being supported is the *conclusion* of the argument. The reasons given in support of the conclusion are called the *premises*.

Following Daniel O'Keefe (1977) on this issue, this distinction makes it possible to say "I *made* an argument *that* 'This person became ill because she got wet under the rain' "; and to say "I *had* an argument with the dean *about* the place of philosophy in the new Faculty." The first corresponds to what M. Engel characterizes as the logical sense and the second to the ordinary sense. Now, what Engel does here is not just indicate the distinction in order to introduce the logical sense. He really wants to stress that logical argumentation should become the standard for argumentation in general wherever and however it takes place. In this sense making it possible to develop 'arguing about' in terms of logical arguments. The distinction has come to play a most important role in Argumentation Theory for the past few decades. O'Keefe introduced it as a distinction between arguments1 and arguments2 after which there followed a remarkable development in focusing increasingly more on arguments2, that is, on 'arguing about'. I will come back to this topic shortly.

I would like now to concentrate a bit on some aspects of logical argument. Let me start with the case of the traditional syllogism:

All human beings are mortal }major premise Socrates is a human being }minor "
Socrates is mortal }conclusion

The expectation is that the inference of this argument should be valid, that is, that on the assumption that the premises are true the conclusion must necessarily be true. Moreover and ideally that the argument should also be sound, that is, that its premises should be true on top of having a valid inference. We could say that in the above syllogism, both conditions are met, the inference is valid and, at least in an ordinary sense, we could accept that both premises are true (I should say that in many courses that I have taught there has been a good deal of discussion about the major premise here.)

Now, another expectation is that arguments should not be interfered by emotions. These are not only foreign to the argument but also they can distort its inner logic. Another important assumption is that logical argumentation should become a sort of paradigm of all activity that is expected to be epistemologically correct.

Let us assume that somebody participates in a dispute about Canadian politics and makes an argument that "Harper is better than Dion because he is fiscally responsible", the assumption being that "[all] fiscally responsible politicians are better". A disputant may reply that the inference is incorrect and /or that the explicit premise and/or the implicit premise are false. Clearly, in this case, the expectation is that the dispute should proceed by producing logical arguments. If either disputant becomes 'excessively' emotional about the argumentation then s/he should calm down and then reason leaving emotions aside.

I go back to Morris Engel. I will take him as representative not only of a long academic tradition in Western society, but also as representative of what seems still a main thrust in Argumentation Theory. Engel expects his readers to be able to develop

logical expertise such that they can be engaged in argumentations of the kind exemplified in the 'Harper/Dion' example. Furthermore, his book concludes with an explicit discussion of the negative role that emotions can play in argumentation. This is a key moment in order to introduce Michael Gilbert's theory of Multi-Modal Argumentation (Gilbert, 1997); for his position is that the above-mentioned academic tradition has resulted in logical reductionism. In addition, not only emotions are left out but also intuitions and physicality. Gilbert says that it is necessary to extend the field of argumentation in order to recognize three other modes of argumentation (at least): the emotional mode; the kisceral mode; and the physical mode. This implies that argumentation should not be reduced to the logical mode unless of course there is a logical argument going on in which case it seems much better to proceed according to logical rules. Now, first of all it seems difficult to find arguments that relate solely to one mode and thus we should be able to be aware of their real composition; and secondly, probably there is a much greater number of emotional arguments in real life than logical arguments (at least in my 40 odd years of academic life I have found very few arguments in universities that proceed along the lines of the logical mode really.) This issue has become also important in psychotherapy as we can read in L. Greenberg and S. Paivio's book working with emotions in psychotherapy (1997, p. 25): "Our contention is that attempts to not receive our feelings is one of the greatest follies of the active, controlling orientation of the Western mind." In any event, Gilbert's theory assumes openness to at least the four modes such that we can be in a position to recognize all the different aspects involved in argumentation and not only the concerns of the logical mode.

I will now refer in some detail to Gilbert's view on emotional arguments. I will do this by quoting one of his examples and comments on the subject contained in his book *Coalescent Argumentation*. (Gilbert, 1997, pp. 83-84)

Paula is sitting in Professor Tome's office. She is pleading for an 'A' in his logic course. 'Don't you see,' she explains plaintively, tears in her eyes, 'if I don't get an 'A' in your course I won't make medical school, and my life will be ruined. I won't have anything left to live for.'

Example 6.6 is an example of a primarily emotional argument. Paula's appeal is essentially based on her *desire* to go to medical school and its emotional importance to her, as opposed to her academic ability to meet the entrance requirements. The reason she provides Professor Tome with is the earnestness of her longing, the strength of her desire: 'If only he understands how important it is to me, surely he will grant my wish.' Her argument includes as one relatively minor part the words she uses, but also involves the illustration by use of her body and human emotional communication devices just how crucial her grade is to her.

Other examples could bring forth the tantrums of children, the despair of rejected suitors, or the plaints of frustrated spouses. All the same, whatever the reader's paradigmatic case, the point remains: emotional arguments are arguments that rely more or less heavily on the use and expression of emotion. These emotions are often communicated to us without benefit of language, or where language is purely ancillary to the main thrust of the communication. Naturally, there are great questions of degree: Communications will be more or less emotional running from highly or nearly pure emotional states to ones that are hardly emotional at all.

Emotional arguments are central to human disputation. They communicate to us aspects of a dispute partner's world that logical arguments do not. These include such elements as degree of commitment, depth, and extent of feeling, sincerity, and degree of resistance. These are important, nay vital, components in communicating a position. Imagine, if you will, how unconvincing would be the

words of someone standing for, say, dean, who explained that she truly wanted the job, but spoke entirely in extremely flat unemotional language. Emotion often tells us what people believe, and, more significantly, that there is more going on behind their words. In many arguments, and especially intimate relationship arguments, emotion can be essential to break a deadlock by bringing attention to one dispute partner's level of involvement. The attempts to reduce these communications to another, perhaps more academically palatable mode, must ignore the fact that what is communicated is far more than the words or even actions used in the communication. That is why we must disdain reductionism: It is like translating poetry from one language to another—some of the sense may well be there, but the very heart of the poem is likely lost.

In spite of the depth and significance of Gilbert's contribution to the understanding of these pressing issues, they remain rather obscure, in my opinion. The reason for this, I believe, is partly due to the enormous power of the philosophical, scientific, academic and educational tradition of Western Civilization that puts such a strong value on logic, empirical science and technology as essential to the development of human life: indeed they are essential and there lies their real value; but, the problem is that Western Civilization has confused their necessity with their sufficiency and indeed while they are necessary, they are not sufficient in order to live a more productive and meaningful life.

Arguments2 necessarily involve the presence of arguments1, mostly in the expression of propositions made by each arguer. When Michael Gilbert describes what he calls emotional arguments, he seems to be referring to the utterances of each arguer: these arguments are emotional because each arguer, or at least one of them, feels emotions. In this sense, if we are dealing with the interaction between arguers, then emotional arguments can be characterized as emotional if at least one of the arguers is expressing emotions. However, then, what is an emotion? Is it the 'raw' feeling, so to speak? Alternatively, is it, as Matte-Blanco defines it, a combination of physical, physiological, affective and logical expressions? The main issue for us now is that according to Matte-Blanco emotions involve propositional activity inherently, and not only as "ancillary to the main thrust of the argument", as Michael Gilbert says (Gilbert, 1997, p. 84). Matte-Blanco's way of approaching emotions may be evaluated as problematic, an issue that I will discuss below, but it is also the case that, at least in my experience, I have never felt an emotion as purely 'raw feeling' and physical sensations. Thus, I think that it is fruitful to examine the issue of emotional arguments a la Michael Gilbert from the perspective of Matte-Blanco: we need to be reminded that Matte-Blanco's view is that the logic inherent in emotion is rather on the side of symmetrical logic.

I proceed now to analyze the emotional argument quoted above, "The Grade". We may assume that Paula is sincere in the expression of her feelings, that is, that she actually feels the emotions that she is expressing, and that she may not be manipulating Professor Thome, for another reason. An even if that is the case, Paula may be using what she intuitively knows about the expression of emotions in any case. Thus, in the worst scenario, we may still be able to say something relevant about the expression of her emotions.

From a bi-logical point of view, it is possible to analyze Paula's emotional argumentation as follows: the 'A' grade in the course is perceived by her as an element of the set of elements needed to be accepted in a medical school. This may probably be true, since acceptance in competitive university places requires a high-grade standing. The issue is that given this reality, she is claiming, emotionally, that she needs the 'A' without deserving it, but as a matter of her need to be a medical doctor. Then the reasons that she

provides for this claim show that she has identified the whole of her life with being a medical doctor. We may say then that this is a more symmetrical expression: her life is many things besides being a given professional, thus if she does not make medical school she could have several other choices open to her. However, she does not seem to be prepared to accept other choices, probably because she has a deep emotional identification with being a medical doctor. The depth of this identification is shown in the fact that she sees no other options open to her. Therefore, we can understand that she feels that her life will be ruined, and that she will have noting left to live for. From a bilogical perspective, then, we can assess her argument as highly symmetrical. Now, being this the case, it is also possible to notice that her emotional argument contains as well some significant elements of traditional logic. She is trying to persuade Professor Thome with awareness, the logical sequence is clear, there are premises and a conclusion, etc. In summary, Paula's argument is bi-logical.

Perhaps, we should try to deal a bit more with the issue of the symmetrical depth of the emotions involved in her argument. For this purpose, we may as well imagine a similar argument by student Mark addressed to Professor Thome. Mark claims that he needs an 'A' in the logic course because he wants to be accepted in medical school, and this is a very important goal for him: he has always wanted to be a medical doctor, and it would be a disappointment not to be accepted, especially if all depends to an extent on the grade in logic.

Actually, we know very little about Paula's emotional desire to be a medical doctor, and neither do we know much about Mark's wish. However, it can be clearly noticed that Mark's emotional argument is less deep than Paula's is: he expresses only a sense of disappointment in not being accepted in medical school; he is not identifying being a medical doctor with the whole of his life, and then he does not feel that his life will be ruined if he is not accepted. Mark's argument is also bi-logical as it contains traditional logic and a certain amount of symmetry shown in the fact that he loses sight of the meaning of a grade in a course: thus, he is emotionally unable to separate his desire from real achievements in the course. It may be possible to say that Mark's argument falls into the category of what Matte-Blanco (Matte-Blanco, 1988, p. 53) calls "more or less conscious emotions", or slightly less than that. Paula, on the other hand, has indeed lost sight of the meaning of grades, but her emotions take her much deeper into symmetry.

It is possible to show that, in general, the examples of emotional arguments provided by Gilbert can be interpreted, similarly to what I have done with The Grade example, as bi-logical, with more or less depth of symmetry. Given the limited time and space allowed for this paper, and the inherent difficulty of doing so many things in a single paper, I stop there. However, I believe that a few final reflections on the relation between Matte-Blanco and Gilbert seem appropriate.

Perhaps, Gilbert would have some difficulty in accepting Matte-Blanco's idea that emotions involve inherently a certain type of thinking, even if this latter one is not exactly of the traditional logical kind of logical arguments. Gilbert may perfectly well disagree with Matte-Blanco in that, no matter what efforts Matte-Blanco does to indicate that symmetrical logic is not traditional logic, ultimately he is using traditional logic in order to interpret emotions. This would certainly be a fair point. Nevertheless, I think that this critical view would be based on the idea that emotions are 'raw' feelings (approximately, what Matte-Blanco calls "sensation-feeling"), so to speak, and therefore,

they would be almost impossible to articulate in our overall experience without some propositional activity associated to them. Here lies the problem then: is the thinking articulation of emotions an inherent part of the emotion, as Matte-Blanco claims; or is it ancillary to it as Gilbert says?

Moreover, some psychotherapists think that emotions involve a cognitive dimension. This is what L. Greenberg and S. Paivio (1997) discuss in detail in their book. It seems to me that it would be problematic to interpret any cognitive aspect in emotion as merely based on a 'raw' feeling. Possibly, a pragmatic solution for a theory of argumentation could be to leave the problem for future research on this very complex matter, at the same time that it could be possible to say that there is a thinking associated (inherently or closely) with emotions and that Matte-Blanco's theory of bi-logic provides a way to interpret emotional arguments as bi-logical involving more or less depth of symmetry.

On a final note, in any event, both Ignacio Matte-Blanco and Michael Gilbert conceive of emotions and logic as profoundly and inseparably related.

link to commentary

REFERENCES

Carveth, D.L. (2005). The Psychoanalytic Method for the Study of Emotions in Organizations. Unpublished paper.

Deutschmann, L. (1991). Triumph of the Will: The Image of the Third Reich. Wakefield, NH: Longwood Academic.

Gilbert, M. (1997). Coalescent Argumentation. Mahwah, NJ: Lawrence Erlbaum Associates.

Gilbert, M. (2002). Let's talk: Emotion and the Pragma-Dialectic model. In F.H. van Eemeren, J.A. Blair, C.A. Willard and F. Snoeck Henkemans (Eds.), *Proceedings of the Third Conference of the International Society for the Study of Argumentation* (pp. 3-12). Amsterdam: SicSat.

Engel, S. M. (2000). With Good Reason. Boston-New York: Bedford/St. Martin's.

Freud, S. (1983). The Interpretation of Dreams. Harmondsworth: Penguin Books.

Freud, S. (1984). On Metapsychology: The Theory of Psychoanalysis. Harmondsworth: Penguin Books.

Freud, S. (1973). New Introductory Lectures on Psychoanalysis. Harmondsworth: Penguin Books.

Greenberg, L. S. and Paivio, S.C. (1997). Working with Emotions in Psychotherapy. New York: Guilford Press.

Matte-Blanco, I. (1975). The Unconscious as Infinite Sets. An Essay in Bi-Logic. London: Duckworth.

Matte-Blanco, I. (1988). Thinking, Feeling, and Being. London and New York: Routledge.

O'Keefe, D.J. (1977). Two concepts of argument. *Journal of the American Forensic Association*, 13, 121-128.