Over twenty-five years of publishing research articles related to the theory and applications of psychological type and the Myers-Briggs Type Indicator® instrument.

66

Journal of Psychological Type®

Issue 7 | JUL 06

> Individuals who prefer Intuition (N) and Thinking (T) are the most likely to score high on argumentativeness, with ENTJs leading the way.

Argumentativeness and Myers-Briggs Type Indicator® Preferences

Donald A. Loffredo, Ed.D.
University of Houston–Victoria

Susan K. Opt, Ph.D.
Florida Southern College

ABSTRACT

This study examined the relationship between the communication trait argumentativeness and Myers-Briggs Type Indicator® (MBTI®) preferences. Participants who preferred Intuition (N) and Thinking (T) were more likely to be argumentative than participants with Sensing (S) and Feeling (F) preferences. The ENTJ type and the NT core preference tended to score higher in argumentativeness than other MBTI types. This study supported other research showing that people with different personality preferences also differ in communication behaviors and traits. This could have implications for the individual's comfort and success in society. In addition, an awareness of the relationship between MBTI preferences and argumentativeness might help educators create better programs for training in argumentativeness.

INTRODUCTION

Over the past 2 decades, the communication trait known as argumentativeness has received increasing attention in communication and psychology research.

Argumentativeness, which Infante and Rancer (1982) conceptualized as "a generally stable trait which predisposes the individual in communication situations to advocate positions on controversial issues and to attack verbally the positions which other people take on these issues" (p. 72), is viewed as contributing to the individual's participation and success in U.S. culture.

Infante and Rancer (1996) noted that argumentative communication is "crucial in a democracy" (p. 320). It is a communication pattern that helps to "support, inform, and influence" the workings of governmental, private, and public institutions in U.S. society. Linking argumentativeness to specific MBTI preferences, then, can provide increased understanding into the communication behavior and possibly the social experiences of the personality types. For example, because the U.S. culture is one that emphasizes argumentativeness, knowing the relationship between that communication trait and MBTI preferences may provide insight into the personality types' participation and comfort level in such a culture. Rancer (1998) noted that "understanding the communication behavior of others can be enhanced by knowledge of the traits that individuals possess . . ." (p. 149). An initial study revealed a slight relationship between argumentativeness and MBTI preferences (Loffredo & Opt, 1998). The purpose of this study was to extend the previous research and search for significant correlations between argumentativeness and MBTI preferences.

> *. . . argumentativeness is considered a constructive communication trait, because the messages are content-oriented, not oriented toward attacking an individual . . .*

BACKGROUND

Argumentativeness can be conceptualized as one of four communication traits that form the concept known as aggressive communication. Infante (1987) viewed aggressive communication as being controlled by these four traits, which also interact with situational factors to influence communication. As Rancer (1998) explained, "Two traits (assertiveness and argumentativeness) are considered constructive, and two traits (hostility and verbal aggressiveness) are considered destructive" (p. 151). Rancer further noted that although all argumentative behavior is aggressive, not all aggressive behavior is argumentative.

Argumentativeness is characterized by "advocacy for and defense of positions on issues simultaneous with the refutation of the positions other people take" (Infante & Rancer, 1996, p. 322). According to the researchers, argumentativeness arises out of competing tendencies—to approach arguments and to avoid arguments. "The more the motivation to approach arguments exceeds the motivation to avoid arguments, the more argumentative the individual is" (Rancer, 1998, p. 153). Some people are classified as high argumentative (high approach/low avoid) and others low argumentative (high avoid/low approach). However, Rancer also pointed out that two types of moderates exist. Individuals can be high approach/high avoid and, despite conflicting feelings, tend to argue only when they feel they can "win" an argument. Others can be low approach/low avoid and, despite feeling apathetic, argue only when they feel they must.

Since Infante and Rancer (1982) first conceptualized argumentativeness, numerous studies in both communication and psychology have explored its relationship to a variety of human behaviors and experiences. A review of recent literature shows that researchers have given much attention to the connection between argumentativeness and verbal aggressiveness (Ifert & Bearden, 1998; Infante & Rancer, 1996) because both are viewed as subcomponents of aggressive communication. Verbal aggression, in which the person attacks the self-concept of another rather than just the issue, is considered a destructive communication strategy, whereas argumentativeness is considered constructive (Infante & Wigley, 1986). Besides verbal aggressiveness, argumentativeness also has been correlated recently with variables such as culture (Toth, 1999), satisfaction and cohesion in group experiences (Anderson & Martin, 1999), compulsive communication (Bostrom & Harrington, 1999; Hackman, Johnson, & Barthel-Hackman, 1995), cognitive and communication flexibility (Martin, Anderson, & Thweatt, 1998), and persuasion (Kazoleas, 1993; Levine & Badger, 1993). Researchers in psychology have also examined communication variables, as well as looking at the relationship between argumentativeness and personality.

For example, argumentativeness scales have been correlated with the facet and domain scales of the Revised NEO Personality Scale (Schill, 1996).

Myers and Rocca (2001) noted that research on argumentativeness has consistently indicated that subjects who score high in argumentativeness differ in significant ways from participants who score low. Differences in argumentativeness resulted in differences in areas such as amount of argumentation, beliefs about arguing, subjects of argumentation, self-esteem, perceptions of social desirability, leadership, and conflict strategies. In general, argumentativeness is considered a constructive communication trait, because the messages are content-oriented, not oriented toward attacking an individual, and high argumentativeness scores have been linked with positive outcomes in group and organizational experiences (Martin et al., 1998; Schullery, 1998). In his extensive review of argumentative literature, Rancer (1998) emphasized, "Perhaps the most important overall finding based on this body of research is that all of the outcomes or consequences of being argumentative are positive. That is, being motivated and skilled in argumentative communication is clearly considered positive across contexts and situations" (p. 156). Thus, a tendency for a Myers-Briggs personality type to approach or avoid argument could have implications for that personality type's success and comfort in a variety of social contexts. Linking argumentation to a person's MBTI preferences can increase understanding of how a particular type communicates and provide educators with insight into how to improve the argumentative skills of the various types.

Aside from an initial study by Loffredo and Opt (1998), no research has specifically addressed the relationship between argumentativeness and MBTI preferences. Loffredo and Opt found only one of the MBTI indices, Extraversion–Introversion (E–I), correlated with argumentativeness. Subjects preferring Introversion scored significantly lower in argumentativeness than subjects preferring Extraversion. However, the research was conducted on a limited sample. This study used a larger sample to repeat the earlier research and test the following hypotheses:

1. As shown in the previous study, persons preferring Extraversion were expected to exhibit a tendency to approach arguments, because of the excitement and challenge of the situation and their need to talk as part of coming to conclusions. Persons preferring Introversion, because they prefer to verbalize only reasoned conclusions, were expected to avoid arguments and score lower in argumentativeness.
2. Persons preferring Intuition were expected to score higher in argumentativeness, whereas people preferring Sensing were expected to score lower. Williams and Bicknell-Behr (1992) reported that Ns scored higher on assertiveness than Ss, and because argumentativeness, like assertiveness, is a subset of aggressive communication, the same relationship should exist. Also, Ns have a tendency to "see potential rather than immediate reality" and "not only tolerate ambiguity, they may create it as they jump from one point to another" (Nasca, 1994, p. 100). Because of this tendency, Ns may have a higher motivation to approach argumentative situations as a way to explore potentialities. In addition, Tobacyk, Driggers, and Hourcade (1991) have shown that Intuition is significantly related to high self-monitoring, which would result in Ns being more aware of the result of their behaviors in a conflict situation. Thus, Ns might lean more toward using a communication strategy such as argumentation, rather than verbal aggressiveness, than Ss.
3. Persons preferring Thinking were expected to score higher than Fs in argumentativeness, because of the T's tendency to compete or compromise in conflict situations. In addition, Ts are noted for their ability to detach themselves emotionally from anxiety-producing communication situations and to focus on content-oriented messages rather than on personal attacks. This appears similar to Schullery's (1998) depiction of highly argumentative people as follows: "A highly argumentative individual not only provides reasons when asked, and approaches situations logically but also takes opportunities to argue that others might ignore" (p. 348). Persons who prefer Feeling should score lower in argumentativeness, because of their tendency to collaborate or accommodate to maintain social harmony (Nasca, 1994). In addition, Williams and Bicknell-Behr's (1992) research on assertiveness suggests that Fs tend to be more sensitive to the opinions of others. This might motivate Fs to avoid argumentativeness.

4. No relationship was expected between Judging (J) and Perceiving (P) preferences and argumentativeness, because this particular index is primarily an indicator of the dominant core personality process. Previous research on the communication traits of communication apprehension and receiver apprehension showed no correlation with J and P (Opt & Loffredo, 2000; Opt & Loffredo, in press).

METHOD

Participants. The sample consisted of 200 subjects (65 males, 135 females) who agreed to participate in the study for extra academic credit in their classes at the University of Houston-Victoria. The participants ranged in age from 21 to 69 years, with an average age of 34.8 (6 participants did not include their age) and standard deviation of 10.2 years. As expected, the distribution was somewhat positively skewed (younger rather than older). The subjects were juniors and seniors, with majors in the arts and sciences, education, and business. The type distribution of the total sample is shown in **TABLE 1 (SEE PAGE 63)**.

Instruments. Each participant completed two instruments: the Myers-Briggs Type Indicator Form G Self-Scorable (revised) measure and Infante and Rancer's (1982) Argumentativeness Scale. The Argumentativeness Scale (ARG) is a 20-item self-report instrument that uses Likert-type scales that range from *almost never true* (1) *to almost always true* (5). It was developed in a series of factor-analytic studies. The instrument assesses a person's tendency to approach argument and tendency to avoid argument. Respondents are considered high or low in argumentativeness if their score is one standard deviation above or below the mean for the normative sample. Scores within one standard deviation are considered as moderate in argumentativeness. Infante and Rancer (1996) reported reliabilities in the .80–.90 range for the ARG Scale. Infante and Rancer (1982) provided evidence of convergent, concurrent, and discriminant validity. Several studies since 1982 have also supported the instrument's validity (Infante & Rancer, 1996).

Participants completed the MBTI instrument in a classroom setting or at the Office of Student Services under the guidance of a counselor trained in MBTI testing procedures or a licensed psychologist. Participants scored their MBTI results and then were debriefed about the MBTI. Next, they completed the ARG Scale at home and provided demographic information (gender, age, class rank, school). The researchers scored the ARG Scale.

Data Analysis. The study's design was quasi-experimental and identified MBTI type preferences as quasi-independent variables and the communication variable of argumentativeness as a dependent measure. To complete analysis, independent-measures *t* tests were used to identify significant differences between the pairs of MBTI type preferences on argumentativeness. An independent-measures *t* test was also used to identify a significant difference by gender on argumentativeness. To minimize inflation of Type I error, the Bonferroni adjustment was used, and the rejection level of the *t* test for each type preference was set at alpha = .0125. A one-way independent-measures ANCOVA was used to identify significant differences by complete MBTI type on the measure of argumentativeness. A one-way independent-measures ANOVA was also used to identify significant differences by core personality traits (NF, NT, SF, ST) on argumentativeness. A one-way independent-measures ANCOVA, with gender as a covariate, was used to examine the relationship between gender and T–F preferences. Finally, a forward inclusion stepwise multiple regression was used to determine the relative strength of the predictors (gender, type preference pairs, core personality traits, complete MBTI type) of argumentativeness.

RESULTS

TABLE 2 (SEE PAGE 64) summarizes the findings revealed by the independent-measures *t* tests. As can be seen, Extraverts scored higher than Introverts on argumentativeness, but the difference was not significant at the .0125 level. Subjects preferring Intuition scored significantly higher than participants preferring Sensing on argumentativeness. Ts scored significantly higher than Fs on argumentativeness, and no significant difference was found between Js and Ps.

An independent-measures *t* test revealed a statistically significant difference between males (M = 6.73, SD = 12.78) and females (M = -1.19, SD = 13.33) on the measure of argumentativeness, $t(198) = 4.02$, $p < .001$.

A one-way independent-measures ANOVA revealed a statistically significant difference by complete MBTI type on argumentativeness, $F(15, 184) = 3.92$, $p < .001$. The effect size measured by partial eta squared was .24. *Post hoc* tests revealed the following:

1. ENTJ participants (M = 15.62, SD = 10.63) scored

Table 1. MBTI® Type Distribution of the Total Sample.

The Sixteen Complete Types

ISTJ *n* = 22 (11.0%) + + + + + + + + + + +	ISFJ *n* = 17 (8.5%) + + + + + + + + +	INFJ *n* = 4 (2.0%) + +	INTJ *n* = 11 (5.5%) + + + + + +
ISTP *n* = 8 (4.0%) + + + +	ISFP *n* = 9 (4.5%) + + + + +	INFP *n* = 13 (6.5%) + + + + + + +	INTP *n* = 4 (2.0%) + +
ESTP *n* = 9 (4.5%) + + + + +	ESFP *n* = 6 (3.0%) + + +	ENFP *n* = 15 (7.5%) + + + + + + + +	ENTP *n* = 9 (4.5%) + + + + +
ESTJ *n* = 25 (12.5%) + + + + + + + + + + + + +	ESFJ *n* = 22 (11.0%) + + + + + + + + + + +	ENFJ *n* = 10 (5.0%) + + + + +	ENTJ *n* = 16 (8.0%) + + + + + + + +

Dichotomous Preferences

E	*n* = 112	(56.0%)
I	*n* = 88	(44.0%)
S	*n* = 118	(59.0%)
N	*n* = 82	(41.0%)
T	*n* = 96	(48.0%)
F	*n* = 104	(52.0%)
J	*n* = 127	(63.5%)
P	*n* = 73	(36.5%)

Pairs and Temperaments

IJ	*n* = 54	(27.0%)
IP	*n* = 34	(17.0%)
EP	*n* = 39	(19.5%)
EJ	*n* = 73	(36.5%)
ST	*n* = 64	(32.0%)
SF	*n* = 54	(27.0%)
NF	*n* = 42	(21.0%)
NT	*n* = 40	(20.0%)
SJ	*n* = 86	(43.0%)
SP	*n* = 32	(16.0%)
NP	*n* = 41	(20.5%)
NJ	*n* = 41	(20.5%)
TJ	*n* = 74	(37.0%)
TP	*n* = 30	(15.0%)
FP	*n* = 43	(21.5%)
FJ	*n* = 53	(26.5%)
IN	*n* = 32	(16.0%)
EN	*n* = 50	(25.0%)
IS	*n* = 56	(28.0%)
ES	*n* = 62	(31.0%)
ET	*n* = 59	(29.5%)
EF	*n* = 53	(26.5%)
IF	*n* = 43	(21.5%)
IT	*n* = 45	(22.5%)

Jungian Types (E)

	n	%
E–TJ	41	20.5
E–FJ	32	16.0
ES–P	15	7.5
EN–P	24	12.0

Jungian Types (I)

	n	%
I–TP	12	6.0
I–FP	22	11.0
IS–J	39	19.5
IN–J	15	7.5

Dominant Types

	n	%
Dt. T	53	26.5
Dt. F	54	27.0
Dt. S	54	27.0
Dt. N	39	19.5

N* = 200 + = 1% of *N

Donald A. Loffredo and Susan K. Opt

Table 2. Means and Standard Deviations for Argumentativeness by Type Preference.

Personality Preference	Mean	Standard Deviation
Introversion	-0.75	14.18
Extraversion	3.34	13.06
	$t(198) = -2.18$, $p < .036$	
Sensing	-1.21	12.22
Intuition	5.50	14.74
	$t(198) = -3.15$, $p < .001$	
Thinking	6.01	12.85
Feeling	-3.30	12.94
	$t(198) = 5.10$, $p < .001$	
Judging	2.10	14.06
Perceiving	0.56	13.02
	$t(198) = 0.77$, $p < .45$	

N = 200

significantly higher than ISFP participants (*M* = -7.33, *SD* = 14.32).

2. ENTJ participants (*M* = 15.62, *SD* = 10.63) scored significantly higher than ISFJ participants (*M* = -7.59, *SD* = 9.33).
3. ENTJ participants (*M* = 15.62, *SD* = 10.63) scored significantly higher than ESFP participants (*M* = -10.50, *SD* = 10.95).
4. ENTJ participants (*M* = 15.62, *SD* = 10.63) scored significantly higher than ESFJ participants (*M* = -3.27, *SD* = 7.69).
5. ENTJ participants (*M* = 15.62, *SD* = 10.63) scored significantly higher than INFJ participants (*M* = -13.25, *SD* = 20.12).

The means and standard deviations for all 16 complete types on argumentativeness are displayed in **Table 3 (see page 65)** in rank order.

A one-way independent-measures ANOVA revealed a statistically significant difference by core personality traits (NF, NT, SF, ST) on argumentativeness, F (3, 196) = 15.01, $p < .001$. The effect size as measured by partial eta squared was .19. *Post hoc* tests revealed the following:

1. NT core personality participants (*M* = 10.95, *SD* = 11.93) scored significantly higher than NF core personality participants (*M* = 0.31, *SD* = 15.40).
2. NT core personality participants (*M* = 10.95, *SD* = 11.93) scored significantly higher than ST core personality participants (*M* = 2.92, *SD* = 12.51).
3. NT core personality participants (*M* = 10.95, *SD* = 11.93) scored significantly higher than SF core personality participants (*M* = -6.23, *SD* = 9.80).

A one-way ANCOVA with gender as a covariate revealed a statistically significant difference between Ts (*M* = 6.01, *SD* = 12.85) and Fs (*M* = -3.30, *SD* = 12.94) on argumentativeness, $F(1, 197) = 15.08$, $p < .001$. Although Ts scored significantly higher than Fs with the effect of gender statistically removed, the effect size as measured by partial eta squared was only .07, so the significant difference was quite small.

A forward inclusion stepwise multiple regression using the same predictors as above, identified the T–F preference pair as the strongest single predictor of argumentativeness ($R^2 = .116$, F [1, 198] = 26.04, $p < .001$). Together the T–F preference pair and complete MBTI type were a strong predictor of argumentativeness (R^2 =

Table 3. Means and Standard Deviations for Argumentativeness by Complete MBTI® Type in Descending Order of Argumentativeness.

MBTI Type	*n*	*M*	*SD*
ENTJ	16	15.62	10.63
INTJ	11	9.00	14.40
INTP	4	7.00	4.97
ENTP	9	6.78	11.73
ESTJ	25	4.28	10.55
ESTP	9	4.11	9.17
ENFP	15	3.47	16.08
ISTJ	22	2.86	15.85
INFP	13	0.92	10.92
ENFJ	10	0.20	16.87
ISTP	8	-2.50	11.61
ESFJ	22	-3.27	7.69
ISFP	9	-7.33	14.32
ISFJ	17	-7.59	9.33
ESFP	6	-10.50	10.95
INFJ	4	-13.25	20.12

.195, F [2, 197] = 23.89, $p < .001$). The T–F preference pair, complete MBTI type, and gender combination was the strongest predictor of argumentativeness ($R^2 = .217$, F [3, 196] = 18.10, $p < .001$). The remaining predictors could not predict any further unique variance in the criterion variable, argumentativeness, so they were not entered into the analysis.

DISCUSSION

The increased sample size in this study elevated the power of the statistical tests used, which revealed several differences between MBTI preferences on argumentativeness. As expected, participants preferring N and T scored higher on argumentativeness, thus showing a greater tendency to approach arguments. Also as expected, subjects preferring S and F scored lower on argumentativeness, thus showing a greater tendency to avoid arguments. This is consistent with previous research by Williams and Bicknell-Behr (1992), which showed similar results on assertiveness. It has also been well documented in communication literature that males tend to be more argumentative than females (Cross, 1999; Rancer, 1998), a finding replicated in this study.

The results, however, did not support an earlier finding in which the E–I preferences were linked with argumentativeness. This suggests that argumentativeness is a communication trait that reflects a person's internal perceiving and judging processes as opposed to the way in which a person externalizes those processes. In other words, a person's tendency to argue may be more an outcome of how that person *processes* information than how he or she *communicates* that information. Furthermore, although the NT core preference scored higher in argumentativeness as would be expected, the fact that the T–F index was the strongest predictor of argumentativeness suggests that this communication trait is most connected to a person's perception of relationship. Argumentativeness is conceptualized as being a content-oriented communication strategy, which fits well with the "detached" nature of Ts, whereas Fs would find this more difficult and might either avoid what they

see as conflict or, when unable to avoid it, use a more relationship-oriented strategy in aggressive communication situations. This assumption could be further tested by examining verbal aggressiveness as related to personality type.

Within the NT personality types, ENTJs tended to score the highest in argumentativeness. This finding fits with the ENTJ personality type descriptors provided by Myers, McCaulley, Quenk, and Hammer (1998). ENTJs' strengths center around organizing, problem-solving, decision-making, analytical thinking, and long-range planning skills. High argumentativeness would support and/or be an outcome of these skills.

In general, this study supported other research that shows that people with different personality preferences vary in communication behaviors and traits, which could have implications for an individual's comfort and success in society. For example, research has shown numerous benefits to being high in argumentativeness (Rancer, 1998). "Arguing stimulates curiosity and increases learning because we seek out more information on the issues we argue about" (p. 156). In his summary of the literature on argumentativeness, Rancer noted that persons who score high in argumentativeness tend to use more diverse strategies to persuade, are viewed as more credible, and tend to be more successful in organizational settings. This raises the question of whether certain personality types will be more socially involved and successful because of their tendency to argue. This study's findings suggest that ENTJs would probably be more participative and hold positions of leadership in U.S. culture at least in part because of their high argumentativeness scores. However, future research needs to explore this finding with a larger sample size, because other personality types with the NT core also had a tendency to score higher in argumentativeness.

Training people to become more effective arguers or persuaders has been one of the goals of communication instruction since the days of Plato and Aristotle. Rancer (1998) noted, "The teaching of skills for advocacy and for the defense of positions and for the refutation of the positions other people take remains a valued and fundamental objective of the communication curriculum" (p. 321). Several programs have been developed to help students become aware of and improve their argumentative abilities. Cognitive training, topical systems, and argument-generating systems have been used to help students gain the tools needed for effective argumentation. However, an awareness of the relationship between the MBTI personality preferences and argumentativeness might help create better programs for enhancing argumentativeness. For example, being aware that persons preferring Sensing might avoid argument because of their focus on detail and literal interpretation could help trainers find strategies to help the Ss follow the abstractions of arguments. Understanding that Fs will typically be concerned about the impact of their argument on the relationship, as "detached" as the argument might be, might help trainers find ways to modify the T-like approach that is assumed in argumentation work.

Several avenues of research related to the MBTI and argumentativeness need to be explored. One direction is to examine in more detail how the personality preferences might combine to temper or motivate argumentation. For example, do NFs, SFs, and STs fall into the category that Rancer (1998) called moderate or apathetic arguers? Research also needs to examine the contrasting negative communication trait, verbal aggressiveness. Do correlations exist between the personality preferences and verbal aggressiveness as they do with argumentativeness? Are Fs more likely to use verbal aggressiveness in conflict situations? Understanding what communication researchers consider the constructive and destructive communication patterns of the various MBTI types can help increase the researchers' knowledge of the types and help each type learn more effective ways of communicating with each other.

As this study has indicated, the MBTI types vary in their tendency to approach and avoid argument. Overall, the relationship between personality type and argumentativeness needs more examination, especially in a culture that tends to emphasize and promote argumentativeness as a way to participate and contribute to society. A clearer understanding of all personality types and their communicative experiences can help all have more positive outcomes in group and social experiences.

REFERENCES

Anderson, C. M., & Martin, M. M. (1999). The relationship of argumentativeness and verbal aggressiveness to cohesion, consensus and satisfaction in small groups. *Communication Reports, 12*(1), 21–31.

Blickle, G. (1997). Argumentativeness and the facets of the big five. *Psychological Reports, 81*(3), 1379–1385.

Bostrom, R. N., & Harrington, N. G. (1999). An exploratory investigation of characteristics of compulsive talkers. *Communication Education, 48*(1), 73–80.

Cross, V. E. (1999). An investigation into the relationship among gender, argumentativeness, and empathy. *Dissertation Abstracts International, 59*(08): 4522B.

Hackman, M. Z., Johnson, C. E., & Barthel-Hackman, T. (1995). Correlates of talkaholism in New Zealand. *Communication Research Reports, 12*(1), 53–60.

Ifert, D. E., & Bearden, L. (1998). The influence of argumentativeness on verbal aggression on responses to refused requests. *Communication Reports, 11*(2), 145–155.

Infante, D. A. (1987). Aggressiveness. In J. C. McCroskey & U. A. Day (Eds.), *Personality and interpersonal communication* (pp. 157–192). Newbury Park, CA: Sage.

Infante, D. A., & Rancer, A. S. (1982). A conceptualization and measure of argumentativeness. *Journal of Personality Assessment, 46,* 72–80.

Infante, D. A., & Rancer, A. S. (1996). Argumentativeness and verbal aggressiveness: A review of recent theory and research. In B. Burleson (Ed.), *Communication yearbook 19* (pp. 319–351). Thousand Oaks, CA: Sage.

Infante, D. A., & Wigley, C. J. (1986). Verbal aggressiveness: An interpersonal model and measure. *Communication Monographs, 53,* 61–69.

Kazoleas, D. (1993). The impact of argumentativeness on resistance to persuasion. *Human Communication Research, 20*(1), 118–137.

Levine, T., & Badger, E. E. (1993). Argumentativeness and resistance to persuasion. *Communication Reports, 6*(2), 71–78.

Loffredo, D. A., & Opt, S. K. (1998). Relating the MBTI to communication apprehension, receiver apprehension, and argumentativeness. *Journal of Psychological Type, 47,* 21–27.

Martin, M. M., Anderson, C. M., & Thweatt, K. S. (1998). Aggressive communication traits and their relationships with the Cognitive Flexibility Scale and the Communication Flexibility Scale. *Journal of Social Behavior and Personality, 13*(3), 531–540.

Myers, I. B., McCaulley, M. H., Quenk, N. L., & Hammer, A. L. (1998). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator.* Palo Alto, CA: Consulting Psychologists Press, Inc.

Myers, S. A., & Rocca, K. A. (2001). Perceived instructor argumentativeness and verbal aggressiveness in the college classroom. *Western Journal of Communication, 65*(2), 113–138.

Nasca, D. (1994, February). The impact of cognitive style on communication. *NASSP Bulletin, 78,* 99–107.

Opt, S. K., & Loffredo, D. A. (2000). Rethinking communication apprehension: A Myers-Briggs perspective. *The Journal of Psychology, 134*(5), 556–570.

Opt, S. K., & Loffredo, D. A. (2006). Receiver apprehension and Myers-Briggs personality type. *Journal of Psychological Type, 66*(3), 15–22.

Rancer, A. S. (1998). Argumentativeness. In J. C. McCroskey, J. A. Daly, M. M. Martin, & M. J. Beatty (Eds.), *Communication and personality: Trait perspectives* (pp. 149–170). Cresskill, NJ: Hampton Press, Inc.

Schill, T. (1996). Self-defeating personality, argumentativeness, and assertive self-statements. *Psychological Reports, 79*(3), 1103–1106.

Schullery, N. M. (1998). The optimum level of argumentativeness for employed women. *The Journal of Business Communication, 35*(3), 346–368.

Tobacyk, J. J., Driggers, E. C., & Hourcade, J. (1991). Self-monitoring and psychological type: A social cognitive information processing model. *Journal of Psychological Type, 22,* 33–38.

Toth, B. J. (1999). The Hatfields and the McCoys: Beliefs about arguing and aggressive communication in the Appalachian culture. *Dissertation Abstracts International, 60*(04): 939A.

Williams, S. B., & Bicknell-Behr, J. (1992). Assertiveness and psychological type. *Journal of Psychological Type, 23,* 27–37.

Donald A. Loffredo, Ed.D., is Associate Professor of Psychology and is the psychology practicum and internship coordinator at the University of Houston–Victoria. He holds a doctorate in counseling psychology from the University of Houston Central Campus, a master of arts degree in agency counseling from Rhode Island College, and a bachelor of arts degree in psychology from the University of Rhode Island. His research interests include test construction, communication, multicultural issues, and MBTI® preferences and communication patterns. His other MBTI research has examined the relationship between type preferences and communication apprehension, receiver apprehension, and argumentativeness. He finds the MBTI measure to be a useful framework for counseling individuals and couples and for helping them understand similarities and differences in communication patterns.

Susan K. Opt, Ph.D., is Associate Professor of Communication at Salem College in Winston–Salem, NC. She holds a doctorate in communication from The Ohio State University, a master of arts in journalism from Ohio State, and a bachelor of fine arts degree from Wright State University. Her research interests include communication and culture, the rhetoric of social intervention, and MBTI preferences and communication patterns. Her other MBTI research has examined the relationship between preferences and communication apprehension, receiver apprehension, and argumentativeness. She finds that the MBTI tool provides a useful framework for helping students understand their similarities and differences in communication patterns.

CONTACT

Donald A. Loffredo, Ed.D.
Associate Professor of Psychology
University of Houston–Victoria
3007 N. Ben Wilson Road
Victoria, TX 77901
(361) 570-4209
LoffredoD@uhv.edu

This *Journal* is being made available through the collaborative efforts of Dr. Tom Carskadon, Editor of the *Journal of Psychological Type,* and the Center for Applications of Psychological Type, Inc., CAPT, worldwide publisher. Dr. B. Michael Thorne serves as Executive Editor of the *Journal of Psychological Type*.

ISSN 0895-8750.