

An MBTI Model of Entrepreneurism and Bureaucracy: The Psychological Types of Business Entrepreneurs Compared to Business Managers and Executives

James H. Reynierse

James H. Reynierse & Associates, Inc.

A theory of entrepreneurism and bureaucracy is presented and confirmed that identifies the J-P preference as primary, and other preferences as subordinate: P is associated with entrepreneurism, and J with bureaucracy.

Abstract

Two independent samples of 135 and 159 entrepreneurs were compared to samples of small business owners, business managers, and business executives. As predicted by theory, for every comparison, entrepreneurs had significantly higher levels of P and lower levels of J. In addition, entrepreneurs had consistently more entrepreneurial EPs, NPs, and TPs, but fewer bureaucratic IJs, SJs, and FJs. Most importantly, when compared to business executives, there were no differences on the S-N preference, but, as predicted, entrepreneurs had more NPs but fewer NJs. The results were interpreted as strong support for the presented theory of entrepreneurism and bureaucracy, whereas the alternative theory of entrepreneurs as NTs was rejected.

Although entrepreneurship is usually identified with the creation of new businesses (e.g., Gartner, 1988), many view this as too restrictive (e.g., Drucker, 1985; Herron, 1992; Pinchot, 1985; Sexton & Bowman-Upton, 1991). For business organizations, the issues were framed explicitly by Carland, Hoy, Boulton, and Carland (1984), Carland, Hoy, and Carland (1988), and Gartner (1988). Although each lamented the lack of uniformity and often vague definitions of entrepreneurship encountered in the entrepreneurial literature, Gartner argued that entrepreneurship is the creation of new organizations, and the entrepreneur is part of the complex process of new venture creation. Thus, Gartner was particularly critical of trait approaches to entrepreneurship.

In contrast, Carland et al. (1984), Carland et al. (1988), and Carland, Carland, Hoy, and Boulton (1988) viewed entrepreneurial ventures as characterized by profitability and growth goals and by innovative strategic practices. The Carlands argued that entrepreneurs are distinguishable by both type and conduct and that trait (or, broadly, personality) approaches have value for understanding entrepreneurship. Similarly, Ginn and Sexton (1990) identified strategic planning, particularly the founder's involvement in the planning process, as central to sustained growth in entrepreneurial

ventures. Sexton and Bowman-Upton (1991) saw entrepreneurship as "an approach to general management that is based on opportunity recognition and exploitation" (p. 12) as a means of achieving growth and change. It was their view that entrepreneurs exist in all walks of life and are the "movers and shakers" of many endeavors.

Drucker (1985) addressed the misconception that an entrepreneur is someone who starts his own new business, and argued instead for the entrepreneur as a broad-based change agent. For Drucker, the entrepreneur "creates something new, something different; they [sic] change or transmute values" (p. 22). He noted the historical context of the term entrepreneur, first as coined by the French economist J. B. Say, where it "was intended as a manifesto and as a declaration of dissent; the entrepreneur upsets and disorganizes" (p. 26), and second in Schumpeter's (1934) terms, where the entrepreneur's task is "creative destruction." Stevenson and Harmeling's (1990) view that entrepreneurism requires chaotic forces for change, that are fundamentally destabilizing, is also within this tradition.

The emphasis on strategic practices and strategic planning embraces such a change-based view of entrepreneurship. This approach includes not only the new business creator but also corporate intrapreneurs

(Herron, 1992; Kanter, 1983, 1989; Pinchot, 1985; Sexton & Bowman-Upton, 1991), inventors (Forsgren, 1990), or even different forms of business entrepreneurs (Vesper, 1980), and it is in sharp contrast to the limited view of entrepreneurship espoused by Gartner (1988).

Empirical Background. The Carlands (Carland & Carland, 1992; Carland, Carland et al., 1988) administered the MBTI and an independent innovation scale to samples of entrepreneurs, small business owners, and managers. They found that entrepreneurs scored higher on the innovation scale than small business owners did, and this was consistent with the NT temperament of entrepreneurs and SJ temperament of both small business owners and managers. Although the Carlands' discussion centered on entrepreneurs as innovative NTs, their empirical results pointed to an important role for the P dimension as well. Thus, Carland, Carland et al. found that entrepreneurs tended to be NTP, whereas small business owners tended toward SFJ. Using continuous scores, Carland and Carland found that although the J preference characterized each group, the manager and small business owner groups were more strongly J than were the entrepreneurs. Similarly, Ginn and Sexton (1988, 1990) found a relatively high percentage of Ps (46%) among entrepreneurial company founders. They also found that fast growth entrepreneurs showed significantly higher N, P, and NP orientations than slow growth founders or managers.

Recently, Reynierse (Reynierse, 1995; Reynierse & Harker, 1995) suggested that the MBTI is particularly useful for examining both entrepreneurship and bureaucracy. According to this view, the P preference is fundamental for initiating change (entrepreneurism), whereas the J preference characteristically promotes stability and resists change (bureaucracy). In other words, the P preference is linked to theories of chaos and change, whereas the J preference is linked to theories of stability and equilibrium (Stevenson & Harmeling, 1990).

Reynierse and Harker (1995) cited several studies (summarized in Table 1) that provide empirical support for this interpretation of the J-P preference and presented a new study in which there was a higher frequency of Ps among staff managers than line managers. Although such results are consistent with both theory and the roles of staff and line managers in large, bureaucratic companies, a more decisive test requires an analysis of business entrepreneurs compared to business managers and executives.

The present paper has two primary objectives: (1) to develop further and present a unified theoretical rationale for an MBTI-based interpretation of bureaucracy and entrepreneurship; (2) to make several highly specific predictions and comparisons from

such a theory for growth-oriented business entrepreneurs compared to small business owners, managers, and executives.

Theoretical Foundations. The theoretical basis for this research can be summarized in three propositions:

1. *The J-P preference represents a broad continuum of bureaucracy and entrepreneurship in which the entrepreneurial P preference tends to initiate and promote change, whereas the bureaucratic J preference tends to encourage the established order and resist change.*

This interpretation of the J-P preference and the empirical support for it were introduced by Reynierse (1995) and Reynierse and Harker (1995). Although the J-P preference is often viewed as subordinate to and derived from the perceptual (S-N) and judging (T-F) processes, this proposition explicitly assumes that the J-P dimension has independent status with properties of its own. This interpretation does not discount the role of J-P for determining the dominant process (Myers & McCaulley, 1985). Such a view is congruent with the descriptive scales of the EAR profile (Saunders, 1989) and the factor structure of MBTI scales (Johnson & Saunders, 1990; Tischler, 1994).

2a. *To the extent that the entrepreneurial P preference is reflective of the perceptual process, either S or N, there should be two distinct classes of entrepreneurs, consisting of highly expedient SP opportunists in relatively conventional, traditional ventures, and highly innovative or visionary NP opportunists who are on the cutting edge of their industry groups.*

Although both SP and NP entrepreneurs take an adaptable, flexible approach that keeps options open, the SP entrepreneur focuses on immediate opportunity that contrasts with the more strategic, future orientation of NP entrepreneurs. In this context, the form of opportunity recognition distinguishes the SP and NP entrepreneurial types.

2b. *To the extent that bureaucracy is the opposite of entrepreneurship, as a corollary there should be two distinct classes of bureaucrats: highly practical SJs who are particularly attentive to operating detail; and innovative and visionary NJs who provide strategic leadership for their organizations.*

This relationship is already established, as SJ predominates for lower levels of management in which day-to-day administrative or operational duties are primary, whereas NJ increases markedly and predominates at executive levels of management in which strategic issues become important (Reynierse, 1993; Roach, 1986).

3. *Although the J-P preference is presumed to be primary for determining bureaucratic and entrepreneurial activity, it is enhanced or diminished by the other preferences: E, N, and T enhance entrepreneurial but diminish bureaucratic tendencies, whereas I, S, and F enhance*

Table 1. Comparison of Entrepreneurial and Bureaucratic Traits and Summary of Empirical Results for Each of the Four Preferences.

MBTI Preferences	Entrepreneurial Traits	Bureaucratic Traits	Empirical Results	References
E-I	Outward-directed focus toward new products, emerging markets and opportunities.	Inward-directed focus toward the established organization and its practices, products, and markets.	Entrepreneurs more extraverted than managers.	Fasiska (1992)
			Entrepreneurs more frequently E than both managers and small business owners.	Carland & Carland (1992)
S-N	Innovative strategic focus emphasizing future possibilities.	Practical operational focus emphasizing present circumstances.	Entrepreneurs are highly innovative, whereas executives are more functional.	Fasiska (1992)
			Entrepreneurs have better idea-generation and strategy development skills than executives.	Fasiska (1992)
			Entrepreneurs more frequently N than managers.	Carland & Carland (1992) Ginn & Sexton (1990)
			Entrepreneurs more frequently N than small business owners.	Carland, Carland, Hoy, & Boulton (1988)
T-F	Tough-minded, impersonal, non-accommodating approach to decision-making.	Tender-minded, personal, caring, and accommodating approach to decision-making.	Entrepreneurs and managers are more frequently T than small business owners.	Carland & Carland (1992)
			Entrepreneurs have lower suc- corance scores than managers.	Sexton & Bowman (1984) Sexton & Bowman-Upton (1986)

T-F (continued)			Management at all levels have high frequencies of T.	Reynierse (1993) Roach (1986)
J-P	Unstructured, adaptable, rebellious toward authority, will break the rules, and tends to initiate change.	Structured, planful, respectful of authority, obeys the rules, and tends to resist change.	Management at all levels have high frequencies of J.	Reynierse (1993) Roach (1986)
			Executives are effective planners, whereas entrepreneurs are more option oriented.	Fasiska (1992)
			Entrepreneurs have relatively high levels of P.	Carland & Carland (1992); Carland, Carland, Hoy, & Boulton (1988); Ginn and Sexton (1988, 1990)
			Creative individuals have high levels of P.	Thorne & Gough (1991)
			Traits such as order, autonomy, independence, change, rebelliousness, impulsiveness, and willingness to take direction reflect the joint effects of S-N and J-P.	Thorne & Gough (1991); Myers & McCaulley (1985)
			Entrepreneurs score high on a scale of change	Sexton & Ginn (1996)
			Entrepreneurs scores higher on a scale of change than managers.	Sexton & Bowman-Upton (1986)
			Entrepreneurial majors score high on scales of autonomy and change but low on a scale of conformity.	Sexton & Bowman (1985)

bureaucratic but diminish entrepreneurial tendencies (Reynierse, 1995). Therefore, entrepreneurs should be more frequently EP, NP, and TP and less frequently IJ, SJ, and FJ than non-entrepreneurs.

The rationale and empirical support for the various distinctions are summarized in Table 1. However, business management does not represent an ideal or pure form of bureaucracy, as business management in large American companies is characteristically high for both E and T (Reynierse, 1993), making comparisons for these preferences or pairs conservative tests of the broader theory.

In summary, within the theoretical framework outlined, the P preference is identified as the primary contributor to entrepreneurship in Proposition 1, the N preference receives secondary status in Proposition 2, whereas Proposition 3 endows the E and T preferences with equivalent, tertiary status. Similarly, the J preference is identified as the primary contributor to bureaucracy in Proposition 1, the S preference receives secondary status in Proposition 2, and the I and F preferences receive tertiary status in Proposition 3.

Method

Subjects. The subjects were independent samples of entrepreneurs and small business owners reported by Carland and Carland (1992), Carland, Carland et al. (1988), and Ginn and Sexton (1988, 1990). The Carland and Carland sample included 114 entrepreneurs and 348 small business owners, and Carland, Carland et al. included 21 entrepreneurs and 56 small business owners. Because both studies included the same rationale for distinguishing entrepreneurs from small business owners, they were combined into one sample of 135 entrepreneurs (the small firm sample) and 404 small business owners. Because the samples were collected through personal approaches, more than 80% of the approached individuals agreed to participate.

In contrast to the Carland's relatively small entrepreneurial companies as measured by both number of employees and annual sales, Ginn and Sexton (1988, 1990) provided a sample of 159 (25.8%) founders or cofounders from *Inc.* magazine's 1986 list of the 500 fastest growing private companies in the United States (the fast growth sample). Thus, although both samples operationalized the entrepreneur in terms of growth objectives, the Ginn and Sexton sample also incorporated elements of success and was based on measurable performance, whereas the Carlands' sample was based on the judgments of the raters.

The comparative samples consisted of three independent groups of managers or executives and included the Carland and Carland (1992) sample of 387

undifferentiated managers from large, publicly held organizations and the Reynierse (1993) multi-source sample of 1,024 lower-level managers and 479 executives.

Procedure. The subjects completed the MBTI, and their individual types were determined. The Carland samples (Carland & Carland, 1992; Carland, Carland et al., 1988) were based on the abbreviated version of the MBTI, Ginn and Sexton (1988, 1990) used Form G, and Reynierse (1993) used both Form F and Form G, depending on the circumstances and individual sample.

The principle data and analyses used were frequency and percentage of types, letter preferences, and pair preferences. Type distributions are provided as type tables with SRTT analyses (McCaulley, 1985). Chi-square values and SRTT comparisons were independent in that the distribution of type for various entrepreneurial, small business owner, and management groups were compared directly.

Analyses were completed in three parts. First, because Carland and Carland (1992) only provided an analysis of continuous scores for the four temperaments for each of their groups, SRTT analyses were completed for these groups. Second, because their manager group did not differentiate managers by levels, and this analysis makes differential predictions based on management level, SRTT comparisons were made between the Carlands' entrepreneurs and small business owner groups and Reynierse's lower-level managers and executives. Third, because the Ginn and Sexton (1988, 1990) sample of fast growth, successful entrepreneurs is very different from the small firm entrepreneurs of Carland and Carland, SRTT comparisons were made between Ginn and Sexton's entrepreneurs and Reynierse's lower-level managers and executives.

Results

Table 2 summarizes the dichotomous preferences for the small firm entrepreneurial, fast growth entrepreneurial, small business owner, and various management groups. Inspection of these data indicates several distinct trends. First, the two entrepreneurial groups are different for the E-I preference, with the Ginn and Sexton (1988, 1990) sample of fast growth entrepreneurs more introverted than any of the other groups. Second, the entrepreneurial groups show the highest levels of N, whereas the executive group is intermediate. Conversely, small business owners and the manager groups have the highest levels of the S preference. Third, the small firm entrepreneurs and small business owners have higher levels of F relative to the other groups and are clearly distinct from the fast growth entrepreneurs

Table 2. Preferences for Carland and Carland (1992) and Ginn and Sexton (1988, 1990) Entrepreneurs, Small Business Owners, and Managers, and Reynierse (1993) Managers and Executives.

Preference	Carland & Carland Small Firm Entrepreneurs <i>n</i> = 135	Ginn & Sexton Fast Growth <i>n</i> = 159	Carland & Carland Small Bus. Owners <i>n</i> = 404	Carland & Carland Managers <i>n</i> = 387	Reynierse Lower-Level Managers <i>n</i> = 1,024	Reynierse Executives <i>n</i> = 479
E	71.8%	46.5%	60.6%	53.9%	60.4%	59.7%
I	28.2%	53.5%	39.4%	46.1%	39.6%	40.3%
S	40.0%	40.2%	60.6%	59.3%	65.8%	46.1%
N	60.0%	59.8%	39.4%	40.7%	34.2%	53.9%
T	68.9%	86.8%	55.7%	74.2%	80.0%	86.6%
F	31.1%	13.2%	44.3%	25.8%	20.0%	13.4%
J	48.2%	54.1%	59.2%	64.4%	76.9%	75.8%
P	51.8%	45.9%	40.8%	35.6%	23.1%	24.2%

and executives, who have very high levels of T. Fourth, the entrepreneurs have the highest levels of the P preference, followed by the small business owners. In contrast, managers and executives are consistently high on J.

Carland and Carland Comparisons. Frequency of letter preferences, preference pairs, and percentages for the Carlands' (Carland and Carland, 1992; Carland, Carland et al., 1988) small firm entrepreneurs compared to their small business owners and managers are presented in Table 3. Comparisons of their small business owners and managers are presented in Table 4. The type table for the small firm entrepreneurs is in Table 5.

The comparison of entrepreneurs and small business owners in Table 3 indicates that N, T, and P were overrepresented for entrepreneurs, whereas S and F were underrepresented compared to the small business owners. Although only of casual interest for these comparisons, entrepreneurs were significantly overrepresented for the critical EP, NP, and TP pairs but significantly underrepresented for the bureaucratic IJ, SJ, and FJ pairs. Compared to managers, Es, Ns, and Ps were overrepresented for entrepreneurs, whereas Is, Ss, and Js were underrepresented. Entrepreneurs were significantly overrepresented for the critical EP, NP, and TP pairs, but significantly underrepresented for IJ and SJ.

Inspection of Table 5 indicates that 11 of 38 Is (29.0%) were INTPs, 4 of 54 Ss (7.4%) were ESTPs, and 20 of 42 Fs (47.6%) were ENFPs. E-TJ tended to predominate, as 22 of 54 S entrepreneurs (40.7%) were ESTJs.

The comparison of small business owners and

managers in Table 4 indicates that for small business owners, Fs were overrepresented, whereas Is and Ts were underrepresented compared to the managers. Although clearly differing on the T-F preference, the small business owner appears to be intermediate to the entrepreneurs and the managers.

Carland's Data Comparisons with Reynierse (1993). Frequency of type, letter preferences, preference pairs, and percentages for the Carlands' small firm entrepreneurs compared to Reynierse's (1993) lower-level managers are presented in Table 5. For the entrepreneurs, Es, Ns, Fs, and Ps were overrepresented, whereas Ss and Js were underrepresented. Again, the critical EP, NP, and TP pairs were all significant and were overrepresented for entrepreneurs, but IJ and SJ were underrepresented for that group. Both ENFPs and ENTPs were overrepresented compared to lower-level managers.

Table 4 compares small business owners with lower-level managers. Small business owners were overrepresented for F and P but underrepresented for T and J compared to these lower-level managers. Almost all of the pairs were significant. The critical EP, NP, and TP pairs were significantly overrepresented, whereas the IJ and SJ pairs were underrepresented. FJ was significantly overrepresented among small business owners, reflecting the relatively large frequency of Fs (44.3%) among small business owners.

Table 6 compares the Carlands' small firm entrepreneurs with Reynierse's executive sample. For the entrepreneurs, Fs and Ps were overrepresented, whereas Is, Ts, and Js were underrepresented compared to executives. Again, the critical EP, NP,

Table 3. Significant Types of Carland and Carland (1992) Small Firm Entrepreneurs and SRTT Comparisons with Carland and Carland Small Business Owners and Managers.
N = 135 *I* = Selection Ratio Index **p* < .05 ***p* < .01 ****p* < .001

Small Business Owners				Managers			
INTP				ISTJ			
<i>I</i> = 3.67*				<i>I</i> = 0.23*			
Dichotomous Preferences				Dichotomous Preferences			
E	97	(71.8%)	<i>I</i> = 1.17	E	97	(71.8%)	** <i>I</i> = 1.33
I	38	(28.2%)	<i>I</i> = 0.73	I	38	(28.2%)	** <i>I</i> = 0.60
S	54	(40.0%)	** <i>I</i> = 0.65	S	54	(40.0%)	** <i>I</i> = 0.68
N	81	(60.0%)	*** <i>I</i> = 1.56	N	81	(60.0%)	*** <i>I</i> = 1.45
T	93	(68.9%)	* <i>I</i> = 1.24	T	93	(68.9%)	<i>I</i> = 0.92
F	42	(31.1%)	* <i>I</i> = 0.70	F	42	(31.1%)	<i>I</i> = 1.20
J	65	(48.2%)	<i>I</i> = 0.80	J	65	(48.2%)	* <i>I</i> = 0.75
P	70	(51.8%)	* <i>I</i> = 1.30	P	70	(51.8%)	** <i>I</i> = 1.43
Pairs and Temperaments				Pairs and Temperaments			
IJ	18	(13.3%)	** <i>I</i> = 0.53	IJ	18	(13.3%)	*** <i>I</i> = 0.41
IP	20	(14.8%)	<i>I</i> = 1.11	IP	20	(14.8%)	<i>I</i> = 1.05
EP	50	(37.0%)	* <i>I</i> = 1.39	EP	50	(37.0%)	*** <i>I</i> = 1.67
EJ	47	(34.8%)	<i>I</i> = 1.00	EJ	47	(34.8%)	<i>I</i> = 1.09
ST	38	(28.1%)	<i>I</i> = 0.79	ST	38	(28.1%)	*** <i>I</i> = 0.58
SF	16	(11.9%)	** <i>I</i> = 0.46	SF	16	(11.9%)	<i>I</i> = 1.07
NF	26	(19.3%)	<i>I</i> = 1.04	NF	26	(19.3%)	<i>I</i> = 1.30
NT	55	(40.7%)	*** <i>I</i> = 2.04	NT	55	(40.7%)	** <i>I</i> = 1.53
SJ	40	(29.6%)	** <i>I</i> = 0.63	SJ	40	(29.6%)	** <i>I</i> = 0.62
SP	14	(10.4%)	<i>I</i> = 0.70	SP	14	(10.4%)	<i>I</i> = 0.93
NP	56	(41.5%)	*** <i>I</i> = 1.65	NP	56	(41.5%)	*** <i>I</i> = 1.65
NJ	25	(18.5%)	<i>I</i> = 1.39	NJ	25	(18.5%)	<i>I</i> = 1.14
TJ	50	(37.0%)	<i>I</i> = 1.09	TJ	50	(37.0%)	* <i>I</i> = 0.71
TP	43	(31.8%)	** <i>I</i> = 1.48	TP	43	(31.8%)	* <i>I</i> = 1.39
FP	27	(20.0%)	<i>I</i> = 1.08	FP	27	(20.0%)	* <i>I</i> = 1.50
FJ	15	(11.1%)	*** <i>I</i> = 0.43	FJ	15	(11.1%)	<i>I</i> = 0.88
IN	20	(14.8%)	<i>I</i> = 1.54	IN	20	(14.8%)	<i>I</i> = 0.95
EN	61	(45.2%)	*** <i>I</i> = 1.56	EN	61	(45.2%)	*** <i>I</i> = 1.74
IS	18	(13.3%)	*** <i>I</i> = 0.46	IS	18	(13.3%)	*** <i>I</i> = 0.43
ES	36	(26.7%)	<i>I</i> = 0.82	ES	36	(26.7%)	<i>I</i> = 0.95
ET	63	(46.7%)	* <i>I</i> = 1.34	ET	63	(46.7%)	<i>I</i> = 1.24
EF	34	(25.2%)	<i>I</i> = 0.94	EF	34	(25.2%)	* <i>I</i> = 1.55
IF	8	(5.9%)	** <i>I</i> = 0.33	IF	8	(5.9%)	<i>I</i> = 0.62
IT	30	(22.2%)	<i>I</i> = 1.07	IT	30	(22.2%)	** <i>I</i> = 0.60

Note: Complete type tables and SRTT comparisons for the small business owner condition can be obtained by contacting the author.

Table 4. Significant Types of Carland and Carland (1992) Small Business Owners and SRTT Comparisons with Carland and Carland Managers and Reynierse (1993) Lower-Level Managers.
 (Note: Complete type tables and SRTT comparisons for the small business owner condition can be obtained by contacting the author.)
 N = 135 I = Selection Ratio Index *p < .05 **p < .01 ***p < .001

Carland & Carland Managers				Reynierse Lower Managers			
ISFP			I = 4.33***	ISFJ			I = 2.50***
ESFJ			I = 2.32***	INFP			I = 3.80***
				ENFP			I = 2.36**
				ESTJ			I = 0.47***
				ESFJ			I = 2.32***
Dichotomous Preferences				Dichotomous Preferences			
E	245	(60.6%)	I = 1.12	E	245	(60.6%)	I = 1.00
I	159	(39.4%)	*I = 0.85	I	159	(39.4%)	I = 0.99
S	245	(60.6%)	I = 1.02	S	245	(60.6%)	I = 0.92
N	159	(39.4%)	I = 0.96	N	159	(39.4%)	I = 1.15
T	225	(55.7%)	***I = 0.75	T	225	(55.7%)	***I = 0.70
F	179	(44.3%)	***I = 1.72	F	179	(44.3%)	***I = 2.21
J	239	(59.2%)	I = 0.92	J	239	(59.2%)	***I = 0.77
P	165	(40.8%)	I = 1.14	P	165	(40.8%)	***I = 1.77
Pairs and Temperaments				Pairs and Temperaments			
IJ	101	(25.0%)	**I = 0.76	IJ	101	(25.0%)	*I = 0.81
IP	58	(14.4%)	I = 1.05	IP	58	(14.4%)	***I = 1.61
EP	107	(26.5%)	I = 1.19	EP	107	(26.5%)	***I = 1.84
EJ	138	(34.2%)	I = 1.08	EJ	138	(34.2%)	***I = 0.74
ST	142	(35.2%)	***I = 0.73	ST	142	(35.2%)	***I = 0.65
SF	103	(25.5%)	***I = 2.19	SF	103	(25.5%)	***I = 2.24
NF	83	(20.5%)	*I = 1.33	NF	83	(20.5%)	***I = 2.17
NT	76	(18.8%)	*I = 0.77	NT	76	(18.8%)	*I = 0.81
SJ	185	(45.8%)	I = 0.94	SJ	185	(45.8%)	**I = 0.81
SP	60	(14.8%)	*I = 1.33	SP	60	(14.8%)	***I = 1.58
NP	105	(26.0%)	I = 1.05	NP	105	(26.0%)	***I = 1.91
NJ	54	(13.4%)	I = 0.83	NJ	54	(13.4%)	**I = 0.65
TJ	136	(33.7%)	***I = 0.65	TJ	136	(33.7%)	***I = 0.52
TP	89	(22.0%)	I = 0.96	TP	89	(22.0%)	***I = 1.44
FP	76	(18.8%)	***I = 1.46	FP	76	(18.8%)	***I = 2.45
FJ	103	(25.5%)	***I = 1.98	FJ	103	(25.5%)	***I = 2.06
IN	42	(10.4%)	*I = 0.69	IN	42	(10.4%)	I = 0.93
EN	117	(29.0%)	I = 1.13	EN	117	(29.0%)	*I = 1.26
IS	117	(29.0%)	I = 0.92	IS	117	(29.0%)	I = 1.02
ES	128	(31.7%)	I = 1.12	ES	128	(31.7%)	I = 0.85
ET	139	(34.4%)	I = 0.90	ET	139	(34.4%)	***I = 0.71
EF	106	(26.2%)	***I = 1.66	EF	106	(26.2%)	***I = 2.21
IF	73	(18.1%)	***I = 1.83	IF	73	(18.1%)	***I = 2.28
IT	86	(21.3%)	***I = 0.58	IT	86	(21.3%)	***I = 0.68

Table 5. Type Distribution of Carland and Carland (1992) Small Firm Entrepreneurs and SRTT Comparisons with Reynierse (1993) Lower-Level Managers.

N = 135 + = 1% of *N* *I* = Selection Ratio Index **p* < .05 ***p* < .01 ****p* < .001

The Sixteen Complete Types				Dichotomous Preferences			
ISTJ <i>n</i> = 7 (5.2%) <i>I</i> = 0.26 +++++	ISFJ <i>n</i> = 4 (3.0%) <i>I</i> = 0.80 +++	INFJ <i>n</i> = 0 (0.0%) <i>I</i> = 0.00	INTJ <i>n</i> = 7 (5.2%) <i>I</i> = 1.00 +++++	E 97 (71.8%) * <i>I</i> =1.18 I 38 (28.2%) <i>I</i> =0.72	S 54 (40.0%) *** <i>I</i> =0.61 N 81 (60.0%) *** <i>I</i> =1.76	T 93 (68.9%) <i>I</i> =0.87 F 42 (31.1%) ** <i>I</i> =1.50	J 65 (48.2%) *** <i>I</i> =0.63 P 70 (51.8%) *** <i>I</i> =2.19
ISTP <i>n</i> = 5 (3.7%) <i>I</i> = 1.25 +++++	ISFP <i>n</i> = 2 (1.5%) <i>I</i> = 1.00 ++	INFP <i>n</i> = 2 (1.5%) <i>I</i> = 1.00 ++	INTP <i>n</i> = 11 (8.2%) <i>I</i> = 2.75 +++++ +++	Pairs and Temperaments			
				IJ 18 (13.3%) *** <i>I</i> =0.44 IP 20 (14.8%) * <i>I</i> =1.67 EP 50 (37.0%) *** <i>I</i> =2.50 EJ 47 (34.8%) <i>I</i> =0.76			
ESTP <i>n</i> = 4 (3.0%) <i>I</i> = 0.80 +++	ESFP <i>n</i> = 3 (2.2%) <i>I</i> = 1.50 ++	ENFP <i>n</i> = 20 (14.8%) <i>I</i> = 4.00*** +++++ +++++ +++++	ENTP <i>n</i> = 23 (17.0%) <i>I</i> = 2.88*** +++++ +++++ +++++ ++	ST 38 (28.1%) *** <i>I</i> =0.52 SF 16 (11.9%) <i>I</i> =1.00 NF 26 (19.3%) *** <i>I</i> =2.17 NT 55 (40.7%) *** <i>I</i> =1.62	SJ 40 (29.6%) *** <i>I</i> =0.53 SP 14 (10.4%) <i>I</i> =1.08 NP 56 (41.5%) *** <i>I</i> =2.95 NJ 25 (18.5%) <i>I</i> =0.93	TJ 50 (37.0%) *** <i>I</i> =0.58 TP 43 (31.8%) *** <i>I</i> =2.05 FP 27 (20.0%) *** <i>I</i> =2.45 FJ 15 (11.1%) <i>I</i> =0.88	
ESTJ <i>n</i> = 22 (16.3%) <i>I</i> = 0.59 +++++ +++++ +++++ +	ESFJ <i>n</i> = 7 (5.2%) <i>I</i> = 1.00 +++++	ENFJ <i>n</i> = 4 (3.0%) <i>I</i> = 1.33 +++	ENTJ <i>n</i> = 14 (10.4%) <i>I</i> = 0.93 +++++ +++++	IN 20 (14.8%) <i>I</i> =1.33 EN 61 (45.2%) *** <i>I</i> =1.97 IS 18 (13.3%) ** <i>I</i> =0.47 ES 36 (26.7%) * <i>I</i> =0.71		ET 63 (46.7%) <i>I</i> =0.97 EF 34 (25.2%) *** <i>I</i> =2.00 IF 8 (5.9%) <i>I</i> =0.73 IT 30 (22.2%) <i>I</i> =0.71	

Jungian Types (E)			Jungian Types (I)			Dominant Types					
<i>n</i>	%	<i>Index</i>	<i>n</i>	%	<i>Index</i>	<i>n</i>	%	<i>Index</i>			
E-TJ	36	26.7	n.a.	I-TP	16	11.8	n.a.	Dt. T	52	38.5	n.a.
E-FJ	11	8.2	n.a.	I-FP	4	3.0	n.a.	Dt. F	15	11.1	n.a.
ES-P	7	5.2	n.a.	IS-J	11	8.2	n.a.	Dt. S	18	13.3	n.a.
EN-P	43	31.8	n.a.	IN-J	7	5.2	n.a.	Dt. N	50	37.0	n.a.

James H. Reynierse,
An MBTI Model of
Entrepreneurism and Bureaucracy: The
Psychological Types of Business Entrepreneurs
Compared to Business Managers and Executives.

Table 6. Type Distribution of Carland and Carland (1992) Small Firm Entrepreneurs and SRTT Comparisons with Reynierse (1993) Executives.

N = 135 + = 1% of *N* *I* = Selection Ratio Index **p* < .05 ***p* < .01 ****p* < .001

The Sixteen Complete Types				Dichotomous Preferences	
ISTJ <i>n</i> = 7 (5.2%) <i>I</i> = 0.33 +++++	ISFJ <i>n</i> = 4 (3.0%) <i>I</i> = 4.00 +++	INFJ <i>n</i> = 0 (0.0%) <i>I</i> = 0.0	INTJ <i>n</i> = 7 (5.2%) <i>I</i> = 0.44 +++++	E 97 (71.8%) I 38 (28.2%) S 54 (40.0%) N 81 (60.0%) T 93 (68.9%) F 42 (31.1%) J 65 (48.2%) P 70 (51.8%)	<i>I</i> =1.18 * <i>I</i> =0.72 <i>I</i> =0.86 <i>I</i> =1.13 * <i>I</i> =0.79 *** <i>I</i> =2.47 *** <i>I</i> =0.63 *** <i>I</i> =2.26
ISTP <i>n</i> = 5 (3.7%) <i>I</i> = 1.25 +++++	ISFP <i>n</i> = 2 (1.5%) <i>I</i> = 2.00 ++	INFP <i>n</i> = 2 (1.5%) <i>I</i> = 2.00 ++	INTP <i>n</i> = 11 (8.2%) <i>I</i> = 1.38 +++++ +++	Pairs and Temperaments	
				IJ 18 (13.3%) IP 20 (14.8%) EP 50 (37.0%) EJ 47 (34.8%) ST 38 (28.1%) SF 16 (11.9%) NF 26 (19.3%) NT 55 (40.7%) SJ 40 (29.6%) SP 14 (10.4%) NP 56 (41.5%) NJ 25 (18.5%) TJ 50 (37.0%) TP 43 (31.8%) FP 27 (20.0%) FJ 15 (11.1%)	*** <i>I</i> =0.46 <i>I</i> =1.43 *** <i>I</i> =2.94 * <i>I</i> =0.72 * <i>I</i> =0.68 *** <i>I</i> =2.29 *** <i>I</i> =2.60 <i>I</i> =0.89 <i>I</i> =0.74 <i>I</i> =1.56 *** <i>I</i> =2.55 *** <i>I</i> =0.50 *** <i>I</i> =0.53 *** <i>I</i> =1.87 *** <i>I</i> =3.38 * <i>I</i> =1.67
ESTP <i>n</i> = 4 (3.0%) <i>I</i> = 1.33 +++	ESFP <i>n</i> = 3 (2.2%) <i>I</i> = 3.00 ++	ENFP <i>n</i> = 20 (14.8%) <i>I</i> = 4.00*** +++++ +++++ +++++	ENTP <i>n</i> = 23 (17.0%) <i>I</i> = 2.88*** +++++ +++++ +++++ ++		
ESTJ <i>n</i> = 22 (16.3%) <i>I</i> = 0.79 +++++ +++++ +++++ +	ESFJ <i>n</i> = 7 (5.2%) <i>I</i> = 1.75 +++++	ENFJ <i>n</i> = 4 (3.0%) <i>I</i> = 1.33 +++	ENTJ <i>n</i> = 14 (10.4%) <i>I</i> = 0.47 +++++ +++++	IN 20 (14.8%) EN 61 (45.2%) IS 18 (13.3%) ES 36 (26.7%) ET 63 (46.7%) EF 34 (25.2%) IF 8 (5.9%) IT 30 (22.2%)	<i>I</i> =0.77 * <i>I</i> =1.33 <i>I</i> =0.67 <i>I</i> =1.00 <i>I</i> =0.91 *** <i>I</i> =2.62 * <i>I</i> =2.00 ** <i>I</i> =0.61

Jungian Types (E)			Jungian Types (I)			Dominant Types					
<i>n</i>	%	<i>Index</i>	<i>n</i>	%	<i>Index</i>	<i>n</i>	%	<i>Index</i>			
E-TJ	36	26.7	n.a.	I-TP	16	11.8	n.a.	Dt. T	52	38.5	n.a.
E-FJ	11	8.2	n.a.	I-FP	4	3.0	n.a.	Dt. F	15	11.1	n.a.
ES-P	7	5.2	n.a.	IS-J	11	8.2	n.a.	Dt. S	18	13.3	n.a.
EN-P	43	31.8	n.a.	IN-J	7	5.2	n.a.	Dt. N	50	37.0	n.a.

James H. Reynierse,
An MBTI Model of
Entrepreneurism and Bureaucracy; The
Psychological Types of Business Entrepreneurs
Compared to Business Managers and Executives.

Table 7. Type Distribution of Ginn and Sexton (1988, 1990) Fast Growth Entrepreneurs and SRTT Comparisons with Reynierse (1993) Lower-Level Managers.

N = 159 + = 1% of *N* *I* = Selection Ratio Index **p* < .05 ***p* < .01 ****p* < .001

The Sixteen Complete Types				Dichotomous Preferences		
ISTJ <i>n</i> = 23 (14.5%) <i>I</i> = 0.72 +++++	ISFJ <i>n</i> = 1 (0.6%) <i>I</i> = 0.17 +	INFJ <i>n</i> = 1 (0.6%) <i>I</i> = 0.33 +	INTJ <i>n</i> = 18 (11.3%) <i>I</i> = 2.25 +++++	E 74 (46.5%) * <i>I</i> =0.77	I 85 (53.5%) ** <i>I</i> =1.35	
				S 64 (40.2%) *** <i>I</i> =0.61	N 95 (59.8%) *** <i>I</i> =1.76	
				T 138 (86.8%) <i>I</i> =1.09	F 21 (13.2%) <i>I</i> =0.66	
				J 86 (54.1%) ** <i>I</i> =0.70	P 73 (45.9%) *** <i>I</i> =1.97	
				Pairs and Temperaments		
ISTP <i>n</i> = 10 (6.3%) <i>I</i> = 2.00 +++++	ISFP <i>n</i> = 3 (1.9%) <i>I</i> = 1.00 ++	INFP <i>n</i> = 6 (3.8%) <i>I</i> = 3.00 ++++	INTP <i>n</i> = 23 (14.5%) <i>I</i> = 4.60*** +++++	IJ 43 (27.0%) <i>I</i> =0.88	IP 42 (26.4%) *** <i>I</i> =3.00	
				EP 31 (19.5%) <i>I</i> =1.35	EJ 43 (27.0%) *** <i>I</i> =0.59	
				ST 57 (35.8%) ** <i>I</i> =0.66	SF 7 (4.4%) ** <i>I</i> =0.39	
				NF 14 (8.8%) <i>I</i> =1.00	NT 81 (50.9%) *** <i>I</i> =1.98	
ESTP <i>n</i> = 9 (5.7%) <i>I</i> = 1.80 +++++	ESFP <i>n</i> = 2 (1.3%) <i>I</i> = 0.67 +	ENFP <i>n</i> = 2 (1.3%) <i>I</i> = 0.40 +	ENTP <i>n</i> = 18 (11.3%) <i>I</i> = 1.80 +++++	SJ 40 (25.2%) *** <i>I</i> =0.44	SP 24 (15.1%) * <i>I</i> =1.60	
				NP 49 (30.8%) *** <i>I</i> =2.23	NJ 46 (28.9%) * <i>I</i> =1.39	
				TJ 78 (49.1%) * <i>I</i> =0.76	TP 60 (37.7%) *** <i>I</i> =2.50	
				FP 13 (8.2%) <i>I</i> =1.08	FJ 8 (5.0%) ** <i>I</i> =0.40	
ESTJ <i>n</i> = 15 (9.4%) <i>I</i> = 0.34* +++++	ESFJ <i>n</i> = 1 (0.6%) <i>I</i> = 0.13 +	ENFJ <i>n</i> = 5 (3.1%) <i>I</i> = 1.25 +++	ENTJ <i>n</i> = 22 (13.8%) <i>I</i> = 1.22 +++++	IN 48 (30.2%) *** <i>I</i> =2.67	EN 47 (29.6%) <i>I</i> =1.27	
				IS 37 (23.3%) <i>I</i> =0.82	ES 27 (17.0%) *** <i>I</i> =0.46	
				ET 64 (40.2%) <i>I</i> =0.83	EF 10 (6.3%) * <i>I</i> =0.53	
				IF 11 (6.9%) <i>I</i> =0.84	IT 74 (46.5%) *** <i>I</i> =1.48	

Jungian Types (E)			Jungian Types (I)			Dominant Types					
<i>n</i>	%	<i>Index</i>	<i>n</i>	%	<i>Index</i>	<i>n</i>	%	<i>Index</i>			
E-TJ	37	23.3	n.a.	I-TP	33	20.8	n.a.	Dt. T	70	44.0	n.a.
E-FJ	6	3.8	n.a.	I-FP	9	5.7	n.a.	Dt. F	15	9.4	n.a.
ES-P	11	6.9	n.a.	IS-J	24	15.1	n.a.	Dt. S	35	22.0	n.a.
EN-P	20	12.6	n.a.	IN-J	19	12.0	n.a.	Dt. N	39	24.5	n.a.

James H. Reynierse,
An MBTI Model of
Entrepreneurism and Bureaucracy: The
Psychological Types of Business Entrepreneurs
Compared to Business Managers and Executives.

Table 8. Type Distribution of Ginn and Sexton (1988, 1990) Fast Growth Entrepreneurs and SRTT Comparisons with Reynierse (1993) Executives.

N = 159 += 1% of *N* *I* = Selection Ratio Index **p* < .05 ***p* < .01 ****p* < .001

The Sixteen Complete Types				Dichotomous Preferences		
ISTJ <i>n</i> = 23 (14.5%) <i>I</i> = 0.96 +++++ +++++ +++++	ISFJ <i>n</i> = 1 (0.6%) <i>I</i> = 1.00 +	INFJ <i>n</i> = 1 (0.6%) <i>I</i> = 1.00 +	INTJ <i>n</i> = 18 (11.3%) <i>I</i> = 0.95 +++++ +++++ +	E 74 (46.5%) * <i>I</i> =0.78 I 85 (53.5%) ** <i>I</i> =1.33 S 64 (40.2%) <i>I</i> =0.88 N 95 (59.8%) <i>I</i> =1.10 T 138 (86.8%) <i>I</i> =1.00 F 21 (13.2%) <i>I</i> =1.00 J 86 (54.1%) ** <i>I</i> =0.71 P 73 (45.9%) *** <i>I</i> =1.92		
ISTP <i>n</i> = 10 (6.3%) <i>I</i> = 2.50 +++++ +	ISFP <i>n</i> = 3 (1.9%) <i>I</i> = 1.50 ++	INFP <i>n</i> = 6 (3.8%) <i>I</i> = 2.00 +++++	INTP <i>n</i> = 23 (14.5%) <i>I</i> = 2.30 +++++ +++++ +++++	Pairs and Temperaments		
				IJ 43 (27.0%) <i>I</i> =0.96 IP 42 (26.4%) *** <i>I</i> =2.21 EP 31 (19.5%) * <i>I</i> =1.55 EJ 43 (27.0%) *** <i>I</i> =0.57 ST 57 (35.8%) <i>I</i> =0.88 SF 7 (4.4%) <i>I</i> =0.88 NF 14 (8.8%) <i>I</i> =1.08 NT 81 (50.9%) <i>I</i> =1.11 SJ 40 (25.2%) ** <i>I</i> =0.63 SP 24 (15.1%) *** <i>I</i> =2.40 NP 49 (30.8%) *** <i>I</i> =1.69 NJ 46 (28.9%) <i>I</i> =0.81 TJ 78 (49.1%) ** <i>I</i> =0.70 TP 60 (37.7%) *** <i>I</i> =2.22 FP 13 (8.2%) <i>I</i> =1.08 FJ 8 (5.0%) <i>I</i> =0.80		
ESTP <i>n</i> = 9 (5.7%) <i>I</i> = 3.00 +++++ +	ESFP <i>n</i> = 2 (1.3%) <i>I</i> = 2.00 +	ENFP <i>n</i> = 2 (1.3%) <i>I</i> = 0.33 +	ENTP <i>n</i> = 18 (11.3%) <i>I</i> = 1.80 +++++ +++++ +			
ESTJ <i>n</i> = 15 (9.4%) <i>I</i> = 0.45 +++++ +++++	ESFJ <i>n</i> = 1 (0.6%) <i>I</i> = 0.20 +	ENFJ <i>n</i> = 5 (3.1%) <i>I</i> = 1.67 +++	ENTJ <i>n</i> = 22 (13.8%) <i>I</i> = 0.63 +++++ +++++ +++++	IN 48 (30.2%) ** <i>I</i> =1.50 EN 47 (29.6%) <i>I</i> =0.89 IS 37 (23.3%) <i>I</i> =1.16 ES 27 (17.0%) * <i>I</i> =0.66 ET 64 (40.2%) <i>I</i> =0.79 EF 10 (6.3%) <i>I</i> =0.71 IF 11 (6.9%) <i>I</i> =1.57 IT 74 (46.5%) * <i>I</i> =1.30		

Jungian Types (E)			Jungian Types (I)			Dominant Types					
<i>n</i>	%	<i>Index</i>	<i>n</i>	%	<i>Index</i>	<i>n</i>	%	<i>Index</i>			
E-TJ	37	23.3	n.a.	I-TP	33	20.8	n.a.	Dt. T	70	44.0	n.a.
E-FJ	6	3.8	n.a.	I-FP	9	5.7	n.a.	Dt. F	15	9.4	n.a.
ES-P	11	6.9	n.a.	IS-J	24	15.1	n.a.	Dt. S	35	22.0	n.a.
EN-P	20	12.6	n.a.	IN-J	19	12.0	n.a.	Dt. N	39	24.5	n.a.

James H. Reynierse,
An MBTI Model of
Entrepreneurism and Bureaucracy: The
Psychological Types of Business Entrepreneurs
Compared to Business Managers and Executives.

and TP pairs were all significantly overrepresented for entrepreneurs. The FJs' significant overrepresentation reflects the large number of Fs among the small firm entrepreneurs. Finally, both ENFPs and ENTPs were overrepresented compared to the executives.

Ginn and Sexton's Entrepreneurs. Frequency of types, letter preferences, preference pairs, and percentages for Ginn and Sexton's (1988, 1990) fast growth entrepreneurs compared to Reynierse's (1993) lower-level managers are presented in Table 7. For the entrepreneurs, Is, Ns, and Ps were significantly overrepresented, whereas Es, Ss, and Js were significantly underrepresented compared to the lower-level managers. Both NP and TP were overrepresented for entrepreneurs, and SJ and FJ were underrepresented. Inspection of Table 7 indicates that 23 of 85 Is (27.1%) were INTPs, 9 of 64 Ss (14.1%) were ESTPs, and 2 of 21 Fs (9.5%) were ENFPs. INTPs were significantly overrepresented for entrepreneurs.

Table 8 compares the fast growth entrepreneurs with the executives. For the fast growth entrepreneurs, Is and Ps were significantly overrepresented, whereas Es and Js were significantly underrepresented. Again, the critical EP, NP, and TP pairs were all significant and were overrepresented for entrepreneurs, whereas the SJ pair was underrepresented.

Finally, it is possible to examine the primary entrepreneurial P preference paired with the subordinate bureaucratic I, S, and F preferences (i.e., the IP, SP, and FP pairs), as well as the primary bureaucratic J preference paired with the subordinate entrepreneurial E, N, and T preferences (i.e., the EJ, NJ, and TJ pairs). Although these are intermediate groups that are less sensitive and reliable tests of theory, the frequent finding throughout that entrepreneurs are generally overrepresented for IP, SP and FP but underrepresented for EJ, NJ, and TJ relative to business managers further supports the primacy of P for entrepreneurship and J for bureaucracy.

Discussion

The theoretical foundations of this research led to several testable hypotheses and predictions. For example, the hypothesis that there are higher levels of P and lower levels of J among business entrepreneurs compared to business managers was confirmed. For every comparison, whether it involved the Carlands' (Carland & Carland, 1992; Carland, Carland et al., 1988) small firm entrepreneurs or Ginn and Sexton's (1988, 1990) fast growth entrepreneurs, or whether it involved the Carland's sample of managers, Reynierse's (1993) lower-level managers, or Reynierse's executives, entrepreneurs were significantly higher for P but lower for J.

The hypothesis that business entrepreneurs will exhibit relatively high frequencies of E, N, T, and P received broad support with the Carlands' small firm entrepreneurs providing particularly striking confirmation. The overrepresentation of ENTPs (Table 5) is also supportive and is consistent with Fasiska's (1992) finding that the "start-up entrepreneur" is characteristically ENTP. Similarly, Ginn and Sexton's (1988, 1990) fast growth entrepreneurs had high levels of N and T, relatively high frequencies of P, but also showed a clear preference for I.

In addition, although there were a few exceptions related to the relatively high frequencies of Fs among the small firm entrepreneurs and the relatively high frequencies of Is among fast growth entrepreneurs, Es, Ns, and Ps tended to be overrepresented, whereas Is, Ss, and Js tended to be underrepresented when compared to samples of business managers. Again, this was the case regardless of business manager sample.

Predictions were also made based on the presumed contributions to entrepreneurship of each of the preferences. Collectively, these hypotheses stated that the primary P preference and any two of the subordinate contributors (E, N, or T) provide a sufficient type foundation for the expression of entrepreneurship.

The hypothesis that I entrepreneurs will tend to be NTP (INTP) received modest support, as both samples of business entrepreneurs had moderately high levels of INTP (27.1-29.0%), which was more frequent than in managerial samples. The significant overrepresentation of INTPs for fast growth entrepreneurs (Table 7) is also consistent with this prediction.

The hypothesis that S entrepreneurs will tend to be STP (ESTP) was disconfirmed, as little evidence was found for any form of SP entrepreneur. This hypothesis was further weakened by the contrary finding that ESTJs tended to predominate (Table 4) among S entrepreneurs.

The hypothesis that F entrepreneurs will tend to be ENP (ENFP) received strong support for small firm entrepreneurs, which had an F bias, but not for fast growth entrepreneurs, where Ts predominated and Fs were infrequent. The significant overrepresentation of ENFPs for small firm entrepreneurs (Tables 5 & 6) is also consistent with this prediction.

It is interesting that F entrepreneurs are restricted to small entrepreneurial firms. This may reflect a more permissive, entrepreneurial spirit in small firms that is replaced by a more demanding TJ orientation in large, successful companies. Thus, Ginn and Sexton's (1988, 1990) successful, fast growth entrepreneurs are more strongly TJ than small firm entrepreneurs are. Similarly, although Fasiska's (1992) start-up entrepreneurs are ENTP, in entrepreneurial

ventures that survive for at least 5 years, management has an ENTJ orientation (E. J. Fasiska, personal communication).

The present theory also makes specific predictions about the relationships of the subordinate contributors to entrepreneurship when paired with the primary P preference. The results for the critical entrepreneurial P pairs were unequivocal, as in every comparison, whether it involved the Carlands' (Carland & Carland, 1992; Carland, Carland et al., 1988) small firm entrepreneurs or Ginn and Sexton's (1988, 1990) fast growth entrepreneurs, or whether it involved the Carlands' sample of managers, Reynierse's lower-level managers, or Reynierse's executives, entrepreneurs were significantly higher for the entrepreneurial EP, NP, and TP pairs.

The corollary hypothesis emphasizes the relationships of the subordinate contributors to bureaucracy when paired with the primary J preference. Here bureaucracy is maximized for the IJ, SJ, and FJ pairs. As predicted for entrepreneurs, IJ and SJ were significantly underrepresented in almost every case, whereas FJ was significant only for the fast growth entrepreneurs compared to lower-level managers.

Empirical confirmation of these pair relationships is entirely consistent with the fundamental premises of this theory. Together, these pair relationships provide compelling empirical support for the primacy of P for entrepreneurship, the primacy of J for bureaucracy, and the subordinate nature of the other preferences.

In general, the predicted relationships apply regardless of level of managerial comparisons, and empirical confirmation for this is documented throughout. However, as a decisive exception to this, and taking into account the theoretical role of N and P in entrepreneurship combined with the empirical fact that the frequency of N increases with management level in large, American companies (Reynierse, 1993; Roach, 1986)—i.e., both business entrepreneurs and business executives tend to be visionary Ns—this theory predicts that the effects for N should be attenuated when business entrepreneurs are compared to business executives. The combined effects of no significant differences for the S-N preference and the interactive effects for NP and NJ (Tables 6 and 8), in which entrepreneurs are overrepresented for NP but underrepresented for NJ only when compared to business executives (i.e., at the highest level of business management) provides maximum support for this hypothesis.

These predictions are particularly important, because they are clearly distinguished from alternative N or NT theories of entrepreneurship. The N and NT temperament theories predict differences for both N and NT, when in fact the results are otherwise, but are silent regarding the crucial (and predicted) NP

and NJ differences. Although the present theory does not dispute the view that entrepreneurs are innovative NTs, it argues that this is subordinate to the primary P preference.

Note that within the current theoretical framework, N business executives are viewed as being more entrepreneurial than other forms of management. Perhaps acting and being entrepreneurial is advantageous within large, bureaucratic companies and contributes to managerial success and promotion to executive positions.

Within the entrepreneurial literature, entrepreneurship is distinguished from small business ownership. The results presented here clearly indicate that samples of entrepreneurs and samples of small business owners are different, and that these differences are meaningful within a theory of entrepreneurship. In general, small business owners tend to be intermediate compared to entrepreneurs and managers.

Finally, the pragmatic, expedient SP entrepreneur of Proposition 2 may be a special form of small business owner. The significant overrepresentation of SP among small business owners (Table 4) is consistent with this hypothesis. Still, the absolute frequency of SPs ranged from only 10.4-15.1% among the various entrepreneurial and small business owner groups, percentages that are considerably less than expected. The prediction from theory is first a qualitative one in which SPs should predominate, and the present results do not pass this stricter, qualitative test.

The theory presented here identifies SPs, and particularly ESTPs, as a distinct form of entrepreneur, although the research presents scant evidence for it. The view of the SP entrepreneur is not new, as Bridges (1992) indicated that ESTP organizations have a somewhat entrepreneurial style, and Campbell (1994) cited a taxonomy in which ESTPs are identified as the ultimate entrepreneurs. Nevertheless, there appears to be a fundamental gap between the type communities' understanding of SPs and our empiricism. My experience is that SPs are reluctant participants in MBTI activities who only participate when completing MBTI materials is an imposed requirement. At best they are disinterested parties who tend to dismiss MBTI concepts. If my perception that SPs do not voluntarily participate in MBTI projects is accurate, then this raises potentially serious sampling error problems for any research that attributes theoretical significance to SPs, for it is quite likely that they will be systematically underrepresented.

General Discussion

The theoretical framework and research presented here takes the view that entrepreneurs and bu-

reaucrats have fundamentally different mindsets that they bring to particular situations and that are not restricted to forming new business ventures or managing complex organizations. Rather, they represent the general case, with distinctive forms and applications in many situations. These mindsets reflect both distinctive qualities described by various MBTI preferences, combinations, and types, and some unique central nervous system organization that is peculiar to these preferences, combinations, and types (Lowen, 1982, 1984), which predisposes individuals to organize their perceptions and to behave in specific ways. As such, this approach provides the theoretical framework to address the inherent complexity of entrepreneurship and provides for different entrepreneurial typologies as suggested by Kao (1985).

The mindsets of business entrepreneurs and business managers are quite different and represent opposing perspectives of their worlds. Although these worlds are undoubtedly complex and comprise a large number of different entities and situations, each is still the source of the perceptions and impressions of people who interact with and are particularly knowledgeable about any particular world. Regardless of an entrepreneur's experiential domain, that set of personal experiences becomes the source for discovery, opportunity, and new directions. Thus, the entrepreneur has an external orientation that promotes opportunity recognition (E), tends to be innovative and can detect patterns and shifts (N), and is highly flexible, promoting an action orientation and responsiveness to change (P). By contrast, business managers in large bureaucratic organizations have an inward orientation toward their own practices (I), are particularly attentive to immediate events within their span of control and influence (S), and generally adhere to internal policies, structure, and plans, a commitment that is antagonistic to flexibility, action, and change (J). Such contrasting ways of perceiving, organizing, and making judgments about the world of everyday events reflects distinctions made between entrepreneurs and managers (e.g., Stevenson, 1985) and corresponds to the content areas that are addressed by the MBTI.

The inadequacy of conventional, mechanistic models of management and the need for alternatives is now well documented (e.g., Morgan, 1986). Peters (e.g., 1987, 1992) has been a frequent critic of traditional management practices and has argued for adaptability to fast-paced, changing business conditions and alternatives to the hierarchical structures of traditional, American business organizations. Reynierse and Harker (1995) discussed Peters' views and noted, "Using type terminology, these ideas represent an entrepreneurial P alternative to what has historically been a bureaucratic J enterprise" (p. 14).

Wheatley (1992) identified mechanistic models of

management with Newtonian models of science that emphasize deterministic, cause-and-effect relationships. As an alternative, she proposed a more free-flowing, participative or self-organizing, change-based management model reflective of the new science, i.e., quantum physics, chaos theory, etc. Again, using type terminology, it is the bureaucratic J model of management that is Newtonian and mechanistic. Wheatley exposed the illusion of control found in the hierarchical, Newtonian management practices that underlie bureaucracy and that strive to preserve stability in an environment characterized by disruption and perpetual change.

Wheatley (1992) called for managers to "stir the pot," to become "equilibrium busters." She noted, "No longer the caretakers of order, we become the facilitators of disorder. We stir things up and roil the pot, looking always for those disturbances that challenge and disrupt until, finally, things become so jumbled that we reorganize work at a new level of efficacy" (p. 116). This is the same entrepreneurial P behavior that leads to "Bonkers Organizations" or "Unglued Organizations" (Peters, 1992) when there is sympathetic top management, or to the cultural non-conformists and mavericks who have difficulty surviving and succeeding in conventional bureaucratic J organizations (Sathe, 1985).

Kao and Stevenson (1985) reminded us that "those who attempt to change existing paradigms test society's tolerance for the ambiguity that a paradigm shift entails. . . . So it may be with entrepreneurship" (p. 25). Although entrepreneurial P managers may be a source of discomfort within bureaucratic J organizations, in a business environment where change is perpetual and stability and control an illusion, they are probably essential for any organization to remain competitive.

References

- Bridges, W. (1992). *The character of organizations*. Palo Alto, CA: Consulting Psychologists Press.
- Campbell, S. (1994). Type, interpersonal needs, and European cultures. *Bulletin of Psychological Type*, 17(3), 34-35.
- Carland, J. C., & Carland, J. W. (1992). Managers, small business owners and entrepreneurs: The cognitive dimension. *Journal of Business & Entrepreneurship*, 4, 55-66.
- Carland, J. W., Carland J. C., Hoy, F., & Boulton, W. R. (1988). Distinctions between entrepreneurial and small business ventures. *International Journal of Management*, 5, 98-103.
- Carland, J. W., Hoy, F., Boulton, W. R., & Carland, J. A. (1984). Differentiating entrepreneurs from small business owners: A conceptualization. *Academy of Management Review*, 9(2), 354-359.

- Carland, J. W., Hoy, F., & Carland, J. A. (1988). "Who is an entrepreneur?" is a question worth asking. *American Journal of Small Business*, 12(4), 33-39.
- Drucker, P. F. (1985). *Innovation and entrepreneurship*. New York: Harper & Row.
- Fasiska, E. J. (1992). Managerial type determination and its role in the development of an Entrepreneurial Quotient (EQ) instrument. *International Journal of Value-Based Management*, 5, 17-37.
- Forsgren, R. A. (1990). Psychological types of casual inventors. *Journal of Psychological Type*, 20, 61-64.
- Gartner, W. B. (1988). "Who is an entrepreneur?" is the wrong question. *American Journal of Small Business*, 12 (4), 11-32.
- Ginn, C. W., & Sexton, D. L. (1988). Psychological types of Inc. 500 founders and their spouses. *Journal of Psychological Type*, 16, 3-12.
- Ginn, C. W., & Sexton, D. L. (1990). A comparison of the personality type dimensions of the 1987 Inc. 500 company founders/CEOs with those of slower growth firms. *Journal of Business Venturing*, 5(3), 313-326.
- Herron, L. (1992). Cultivating corporate entrepreneurs. *Human Resource Planning*, 15, 3-14.
- Johnson, D. A., & Saunders, D. R. (1990). Confirmatory factor analysis of the Myers-Briggs Type Indicator-Expanded Analysis Report. *Educational and Psychological Measurement*, 50, 561-571.
- Kanter, R. M. (1983). *The change masters*. New York: Simon and Schuster.
- Kanter, R.M. (1989). *When giants learn to dance*. New York: Simon and Schuster.
- Kao, J. J. (1985). The corporate new wave: Entrepreneurism in transition. In J. J. Kao & H. H. Stevenson (Eds.), *Entrepreneurism: What it is and how to teach it* (pp. 76-88). Boston: Harvard Business School.
- Kao, J. J., & Stevenson, H. H. (1985). The concept of entrepreneurism: An overview. In J. J. Kao & H. H. Stevenson (Eds.), *Entrepreneurism: What it is and how to teach it* (pp. 25-29). Boston: Harvard Business School.
- Lowen, W. (1982). *Dichotomies of the mind: A systems science model of the mind and personality*. New York: John Wiley & Sons.
- Lowen, W. (1984). Comments on *Dichotomies of the mind: A systems science model of the mind and personality*. *Journal of Psychological Type*, 7, 17-18.
- McCaulley, M. H. (1985). The Selection Ratio Type Table: A research strategy for comparing type distributions. *Journal of Psychological Type*, 10, 46-56.
- Morgan, G. (1986). *Images of organization*. Beverly Hills, CA: Sage Publications.
- Myers, I. B., & McCaulley, M. H. (1985). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologists Press.
- Peters, T. (1987). *Thriving on chaos*. New York: Alfred A. Knopf.
- Peters, T. (1992). *Liberation management*. New York: Alfred A. Knopf.
- Pinchot, G. (1985). *Intrapreneuring*. New York: Harper & Row.
- Reynierse, J. H. (1993). The distribution and flow of managerial types through organizational levels in business and industry. *Journal of Psychological Type*, 25, 11-23.
- Reynierse, J. H. (1995). A comparative analysis of Japanese and American managerial types through organizational levels in business and industry. *Journal of Psychological Type*, 33, 19-32.
- Reynierse, J. H., & Harker, J. B. (1995). The psychological types of line and staff management: Implications for the J-P preference. *Journal of Psychological Type*, 34, 8-16.
- Roach, B. (1986). Organizational decision-makers: Different types for different levels. *Journal of Psychological Type*, 12, 16-24.
- Sathe, V. (1985). Entrepreneurship and company culture. In J. J. Kao & H. H. Stevenson (Eds.), *Entrepreneurism: What it is and how to teach it* (pp. 270-281). Boston: Harvard Business School.
- Saunders, D. R. (1989). *MBTI Expanded Analysis Report manual: A scoring system for Form J of the Myers-Briggs Type Indicator*. Palo Alto, CA: Consulting Psychologists Press.
- Schumpeter, J. A. (1934). *The theory of economic development*. Cambridge, MA: Harvard University Press.
- Sexton, D. L., & Bowman, N. B. (1984). Personality inventory for potential entrepreneurs: Evaluation of a modified JPI/PRF-E test instrument. In J. A. Hornaday, F. Tarpley, J. A. Timmons, & K. Vesper (Eds.), *Frontiers of entrepreneurship research* (pp. 513-528). Wellesley, MA: Babson College.
- Sexton, D. L., & Bowman, N. (1985). The entrepreneur: A capable executive and more. *Journal of Business Venturing*, 1, 129-140.
- Sexton, D. L., & Bowman-Upton, N. B. (1986). Validation of a personality index: Comparative psychological characteristics analysis of female entrepreneurs, managers, entrepreneurship students and business students. In R. Ronstadt, J. A. Hornaday, R. Peterson, & K. H. Vesper (Eds.), *Frontiers of entrepreneurship research* (pp. 40-51). Wellesley, MA: Babson College.
- Sexton, D. L., & Bowman-Upton, N. B. (1991). *Entrepreneurship: Creativity and growth*. New York: Macmillan Publishing Co.
- Sexton, D. L., & Ginn, C. W. (1990). The psychological aspects of rapid growth: Trait intensities of

- the 1988 *Inc. 500* founders and co-founders. In J. A. Hornaday, F. Tarpley, J. A. Timmons, & K. Vesper (Eds.), *Frontiers of entrepreneurship research* (pp. 17-18). Wellesley, MA: Babson College.
- Stevenson, H. H. (1985). A new paradigm for entrepreneurial management. In J. J. Kao & H. H. Stevenson (Eds), *Entrepreneurism: What it is and how to teach it* (pp. 30-61). Boston: Harvard Business School.
- Stevenson, H. H., & Harmeling, S. (1990). Entrepreneurial management's need for a more "chaotic" theory. *Journal of Business Venturing*, 5, 1-14.
- Thorne, A., & Gough, H. (1991). *Portraits of type*. Palo Alto, CA: Consulting Psychologists Press.
- Tischler, L. (1994). The MBTI factor structure. *Journal of Psychological Type*, 31, 24-31.
- Vesper, K. H. (1980). *New venture strategies*. Englewood Cliffs, NJ: Prentice-Hall, Inc.
- Wheatley, M. J. (1992). *Leadership and the new science*. San Francisco: Berrett-Koehler Publishers, Inc.

Acknowledgments

I would like to thank Jim and JoAnn Carland for graciously providing me with the entrepreneur and small business owner MBTI data from their research program. I would also like to thank John Harker for being a sounding board for most of the ideas presented here and for the many conversations related to type in organizations.

Contact

Dr. James H. Reynierse
 James H. Reynierse & Associates, Inc.
 P.O. Box 16069
 Chesapeake, VA 23320

(804) 547-2416
 jreynierse@aol.com

* * *