# *Pleasurable Future Now, Painful Reality Later*? Entrepreneurial Positive Future Thinking and Future Stock Price Crash Risk: Evidence from the U.S. Dot-Com Bubble Burst, 1995-2001

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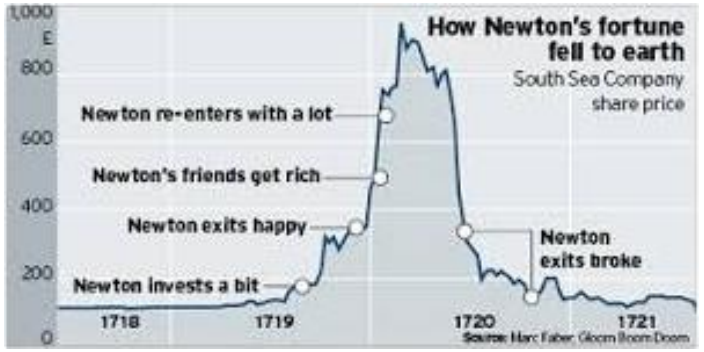
*Communication Purpose Only*

# Table of Contents

# Research Motivation – *Different Era, Historical Documents*

'*Positive fantasy about the future*' appears to prevail *ex ante* when market bubbles are accumulated and I choose the U.S. Dot-Com Bubble era due to data availability.

South Sea Company Bubble (1719)



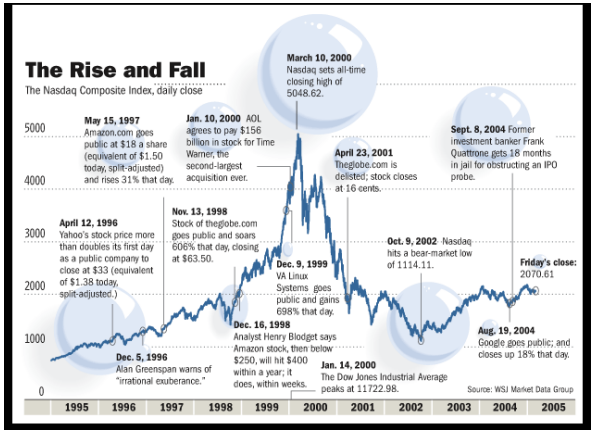

Mississippi Bubble (1720)

Japanese Bubble Economy (1989)

The Neuer Markt in Germany (2000)

Korean IT Bubble (2000)

U.S. Dot-Com Bubble Burst (2000)



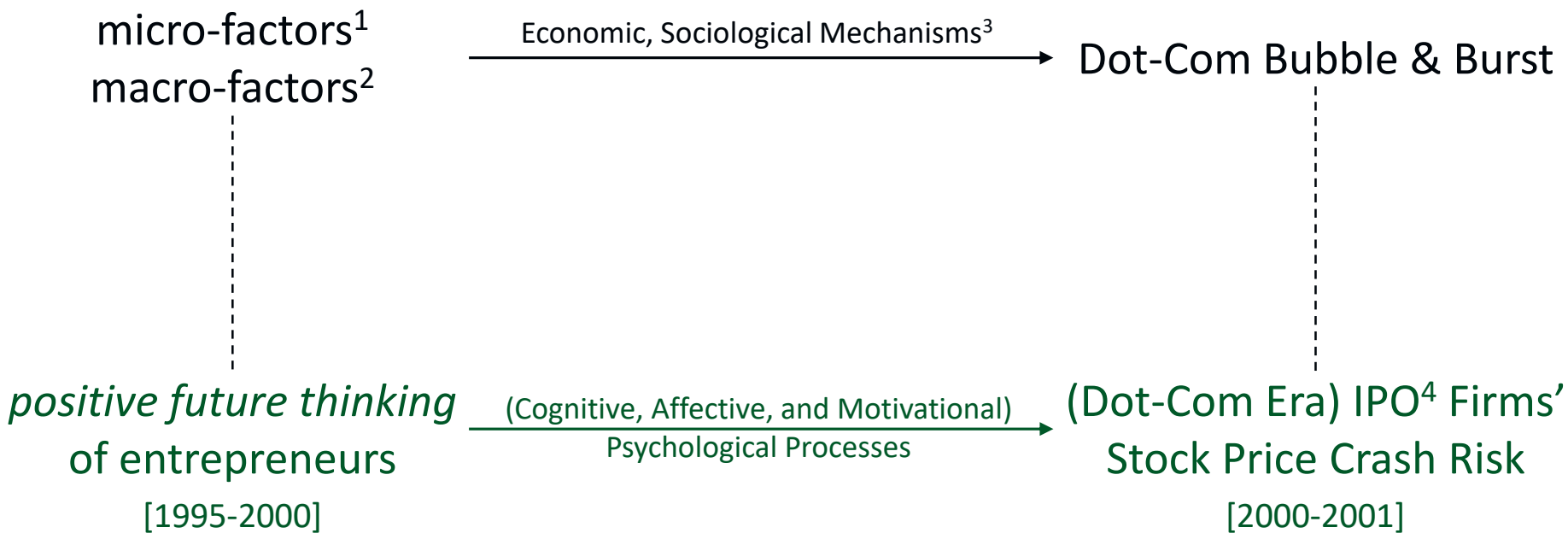

*t*

"I can calculate the motions of the planets, but I cannot calculate the ***madness*** of men." – Sir. Issac Newton (1642-1727) [*Italics* and **bold** are added]

- The modern psychology may help to the frustration of one of the fathers in classical physics? I may say 'yes' and use an index that invented by Sevincer et al. [2014].

# Research Question – *What Drove and Burst the Dot-Com Bubble*?

I add an explanation to why U.S. tech bubble (burst) in 1995-2001 happened based the science of human motivation.




1) Herding behavior (e.g., Schiller 2000; Goonight & Green 2010); 2) Monetary Policy (e.g., Canova 2008); Fiscal policy (e.g., Kraay & Ventura 2005); 3) *Wall Street*'s moral hazards (McCullough 2018); Short-Sale Constraint (Hong & Stein 2001); 4) Initial Public Offering

# Theoretical Development – Positive Fantasy about the Future

Oettingen and colleagues established three mechanisms of 'positive thinking about future' based on the 30+ years of researches.

¶ Affective Mechanism: Energy-Sapping Effect (e.g., Kappes & Oettingen 2011)

¶ Motivational Mechanism: Low Efforts by Mental Attainment (e.g., Kappes, Kappes, & Oettingen 2015)

¶ Cognitive Mechanism: Biased Information Acquisition (Kappes & Oettingen 2012)

The optimistic, feverish moods in the U.S. stock market between 1995 to 2000, reflected as a rhetorical evidence that "*this time*, *indeed*, *things were different*" filled in the minds and hearts of the Wall Street.

♬ "The dot-com bubble was a fantasy period when a lot of VCs actually didn't care if a business turned a profit, because it didn't need to." (McCullough 2018)

▶ The dot-com IPOs in 1995-2000 may reflect this climate in their 'going public' processes and must leave a trail in their corporate narratives: ***IPO prospectuses***.

# Research Design – Data & Sample

1. The initial sample includes all firm-years for which a IPO (Initial Public Offering) prospectus was filed with at least <50KB file size during the dot-com bubble period 1995-2000.

※ Note that I may add additional dot-com bubble period IPO firms due to the data provider's IPO dates (unknowable) misclassification in the WRDS (Wharton Research Data Services) database.

2. I combine the initial sample with weekly stock return data from the CRSP (Center for Research in Securities Price) and financial statement data from Compustat to construct 'crash risks'.

3. Specifically, for each IPO firm-year observation, I match weekly stock returns to the fiscal year if the last trading day of a calendar week falls within the 12-month period ending three months after the firm's fiscal year-end.

4. I then delete observations with nonpositive total assets, low-priced firms (fiscal year-end price lower than $1), observations with fewer than 26 weeks of stock return data, and observations missing financial data used to construct the known determinants of crash risk.

5. The above procedure yields the sample of 2,524 firm-year observations for 7,012 unique firms.

6. I calculated the future stock price crash risks between 6 March 2000 and 2 March 2001, which is known as the dot-com bubble *burst* period.

# Research Design – *Measuring* Positive Future, Crash Risks, & Control Variables

1. Following Sevincer et al. [2014], I calculated the positive future thinking of dot-com IPO firms. Note that I used both the LIWC index and the Loughran-McDonald (LM) dictionary for emotional valence since the LM is the established, standard text analysis tool in business-context documents (see Loughran & McDonald 2011, 2014; Li 2010). The reported results are based on the LM dictionary for emotional valence and the LIWC dictionary for temporal valence. Though it is untabulated, the results were qualitatively similar when I used the LIWC dictionary for emotional valence.

2. Following Jin & Myers [2006] and Hutton, Marcus, & Tehranian [2009], I calculated the three different measures of firm-specific future stock price crash risks: (1) NCSKEW, (2) DUVOL, and (3) COUNT. The technical, mundane details are well-illustrated in the papers. If requested, I will specify the empirical models and provide the details for empirical replications.

(1) NCSKEW: Intuitively, it means extremely negative stock returns beyond the market expectations.

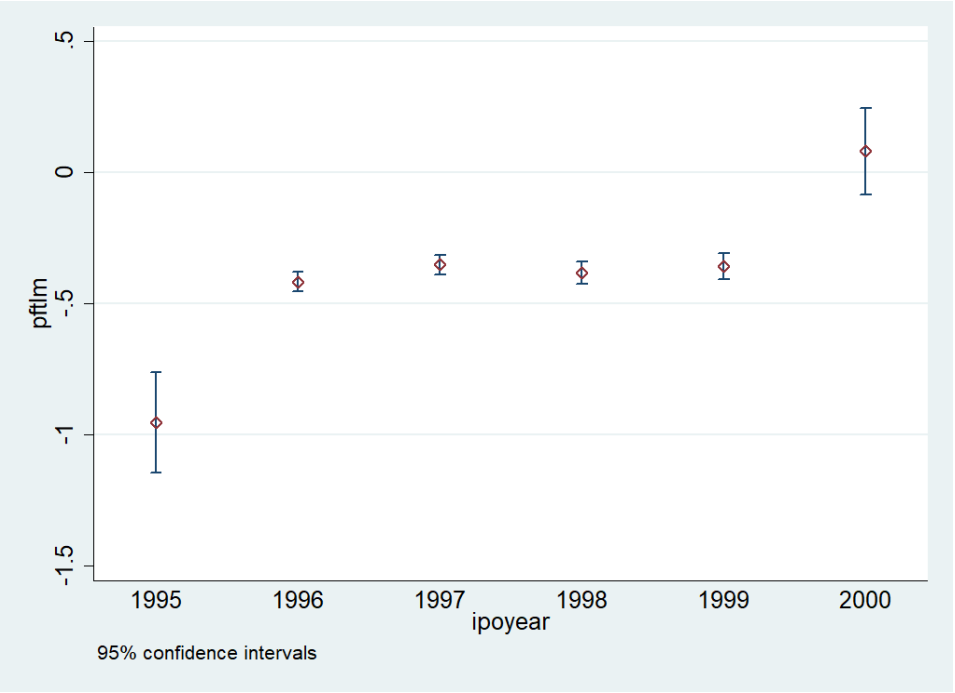
(2) DUVOL: Intuitively, it means the exposure to the hazardous volatility of the stock returns.

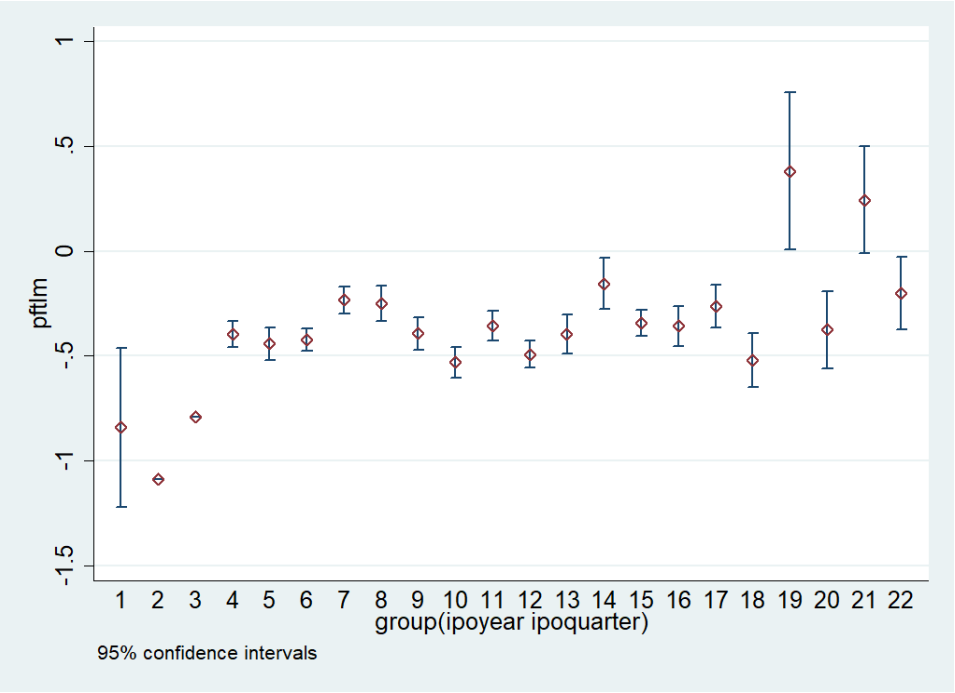
(3) COUNT: Intuitively, it means the likelihood of extremely negative returns events during the year.

3. Consistent with prior studies in future stock price crash risk, I control for a set of known determinants of crash risk: market capitalization (LOGMV), profitability (ROA), accounting conservatism (MTB), financial leverage (LEV), past returns (RET), return volatility (SIGMA).

# Main Results – 1. *Entrepreneur's Positive Future Thinking* Increased during the Dot-Com Bubble period

The number of observations by IPO year: 1995 (11), 1996 (741), 1997 (797), 1998 (485), 1999 (451), 2000 (39[1]).




- Here, I show that the dot-com era (1995-2000) entrepreneurs exhibit the increasing trend of *positive thinking about the future*.

1) 2000.1.1.~2000.3.5.

# Main Results – 2. Descriptive Statistics (n=505)

| Variable | Mean | Standard Deviation | Q1 | Median | Q3 |
|---|---|---|---|---|---|
| *NCSKEW* | **0.121** | 1.079 | -0.543 | 0.074 | 0.703 |
| *DUVOL* | **-0.085** | 0.408 | -0.357 | -0.080 | 0.130 |
| *COUNT* | **0.218** | 0.413 | 0.000 | 0.000 | 0.000 |
| *PFT* | 0.018 | 0.984 | -0.644 | -0.021 | 0.541 |
| *LOGMV* | 5.102 | 1.879 | 3.703 | 4.930 | 6.329 |
| *ROA* | -0.108 | 0.400 | -0.154 | 0.021 | 0.092 |
| *MTB* | 5.933 | 9.448 | 1.118 | 2.713 | 7.947 |
| *LEV* | 0.466 | 0.279 | 0.236 | 0.449 | 0.650 |
| *RET* | 0.003 | 0.020 | -0.012 | 0.000 | 0.015 |
| *SIGMA* | 0.116 | 0.047 | 0.081 | 0.109 | 0.145 |

The statistics correspond to those of prior studies in the crash risk literature (e.g., Kim, Li, and Zhang 2011a,b). * The mean *COUNT* from the logistic regression indicates that 21.8 percent of the firm-years in the sample experience at least one crash week.

# Main Results – 3. Univariate Comparisons

| | Positive Future Thinking (*PFT*) Tercile Group | | | |
|---|---|---|---|---|
| Crash Risk | (1) Low | (2) Medium | (3) High | p-value, H1>0[1] |
| *NCSKEW* | -0.150 | 0.035 | 0.174 | 0.001 |
| *DUVOL* | -0.185 | 0.006 | -0.072 | 0.003 |
| *COUNT* | 0.161 | 0.274 | 0.221 | 0.081 |

Note: Reported p-values are obtained from the one-sided test (H0: (3)-(1)=0, H1: (3)-(1)>0).

I sort the sample into tercile groups by the positive future thinking index and present the mean values of the dot-com bubble burst period crash risk measures for each group.

I find that the differences in crash risk between the high- and low-PFT groups are statistically significant, consistent with the prediction that higher future crash risk is related to higher positive future thinking.

It is, however, noteworthy that these univariate comparisons do not consider other factors that affect the future crash risk.

# Main Results – 4. The Impact of Entrepreneur's Positive Future Thinking on Future Crash Risk

| Variable | (1) *NCSKEW* | (2) *DUVOL* | (3) *COUNT* |
|---|---|---|---|
| ***PFT*** | 0.122** | 0.048** | 0.046** |
| *LOGMV* | 0.075** | 0.038** | 0.010 |
| *ROA* | -0.057 | 0.043 | 0.017 |
| *MTB* | -0.008 | -0.004 | -0.001 |
| *LEV* | -0.383** | -0.082 | -0.025 |
| *RET* | 6.662** | 2.389** | 0.557 |
| *SIGMA* | 0.964 | -0.781 | -0.406 |
| *Industry Fixed Effect* | Yes | Yes | Yes |
| *Observations* | 505 | 505 | 462 |
| *D.V. Mean* | 0.12 | -0.08 | 1.00 |

The coefficient of ***PFT*** is positive and significant in all columns, consistent with the prediction that dot-com IPO firms with higher positive future thinking have higher subsequent stock price crash risk even after controlling for the known determinants of crash risk.

The economic effect of *PFT* on crash risk is comparable to the determinants of crash risk identified by prior research. E.g., Hutton, Marcus, & Tehranian [2009; information opacity], Kim & Zhang [2016; principled reporting], Kim, Wang, & Zhang [2019, textual complexity].

# Main Results – 4. The Impact of Entrepreneur's Positive Future Thinking on Future Crash Risk

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# Main Results – 5. Underperformers & Entrepreneur's Positive Future Thinking

The underperformed dot-com era IPO firms tend to show significantly higher positive future thinking and it is consistent with prior studies.

| | *NCSKEW* | | *DUVOL* | | *COUNT* | |
|---|---|---|---|---|---|---|
| | Performance (Poor = △ROA<0; Good = △ROA>0; *Return on Assets*[1]) | | | | | |
| | Poor | Good | Poor | Good | Poor | Good |
| *PFT* | 0.232*** | 0.120 | 0.099*** | 0.030 | 0.055* | 0.079** |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Fixed Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 217 | 198 | 217 | 198 | 177 | 153 |
| D.V.[2] Mean | -0.04 | 0.21 | -0.14 | -0.03 | 0.00 | 0.00 |

But the coefficients of *PFT* are not significantly different between the two groups when crash risk is measured by *COUNT*. This is probably because of the lack of distinction between persistent and transitory good performance.

1) Operating income before extraordinary items and discontinued operations / total assets. I use *ROA* to capture firm performance, a widely used measure of overall company performance in the capital markets. 2) Dependent Variable.

# Main Results – 6. Litigation Risk & Entrepreneur's Positive Future Thinking

I assigned a dot-com era IPO firm into the high litigation risk subsample if a firm operates in the following industries[1], according to the Fama & French 49 Industry Classification (Kim & Skinner 2012).

| | *NCSKEW* | | *DUVOL* | | *COUNT* | |
|---|---|---|---|---|---|---|
| | Litigation Risk | | | | | |
| | High | Low | High | Low | High | Low |
| *PFT* | 0.193 | 0.125** | 0.083 | 0.046** | 0.080 | 0.043* |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry Fixed Effect | Yes | Yes | Yes | Yes | Yes | Yes |
| Observations | 101 | 404 | 101 | 404 | 101 | 361 |
| D.V. Mean | 0.29 | 0.08 | -0.02 | -0.10 | 0.00 | 0.00 |

Interestingly, the dot-com era entrepreneurs appear to *adapt* their positive future thinking if they expect higher litigation risk and it highlights the importance of social forces in self-regulation.

1) Drugs (13), Hardware Computers (35), Chips Electronic Equipment (37), and Retail (43).

# DISCUSSION

# I reviewed the articles and found the recurring **concepts** and **mechanisms** ...

| | | | | |
|---|---|---|---|---|
| *Antecedents* | Cognitive Complexity | Energization Process | Temptation-Inhibiting Plan | Cultural Norm |
| Need State | Cognitive Demand | Goal Attachment | Task-Facilitating Plan | Loose-Tight Culture |
| Mood [Sadness] | Intention Formation | Plan Formation | Plan Enactment | Social Norm |
| Performance History | Action Initiation | **IF-Process** | **THEN-Process** | Effort Mobilization |
| Working/Episodic Memory | Action Planning | Stimulus Perception | Automatic Initiation | Suitable Mean |
| Goal Disengagement | Explanatory Vacuum | Effective Cue Detection | Efficient Response Initiation | Strategic Automaticity |
| Goal Accessibility | Reflexive Interpretation | Effective Inattention | Cognitive Capacity [Load] | Coping with Stress |
| Planning Emergence | Reflective Interpretation | (Distraction Inhibition) | Executive Functions | Goal Shielding |
| Perceived Feasibility | Desirable Goal | Feasible Goal | Flexible Implementation | Goal Monitoring |
| Efficacy Expectation | (Needs [Motives]) | (Expectation; Efficacy) | Feedback [Offensive] | Goal Maintenance |
| Outcome Expectation | General Expectation | Socially Prescribed Perfectionism | Feedback [Negative] | Persistent Efforts |
| Goal Commitment | Goal Setting | Goal Implementation | Goal Monitoring | Goal Framing |
| Goal Evaluation | Goal Adopting | Goal Striving | Goal (Dis)engagement | Approach Goal |
| Goal Emergence | Goal Intention | Goal-Directed Action | Goal Relinquishment | Avoidance Goal |
| Goal Initiation | Goal Difficulty | Goal-Directed Behavior | Goal Shielding | Goal Content |
| Goal Choice | Goal Activation | Conscious Goal | Nonconscious Goal | Competence Goal |
| Goal Selection | Goal Substitution | Explicit Goal | Implicit Goal | Competence Fantasy |
| Goal Formation | Goal Attachment | Conscientiousness | Learning Goal | Competitive Goal |
| Goal Projection | Time Pressure | Information Processing | Performance Goal | Self-Improvement Goal |
| 'Motivation' Concept | Motivation [Volition] | Motivation & Action | Needs & Incentives | Motivational Intelligence |
| Goal-Behavior Link | Expectancy-Behavior | Expectancy-Commitment | Commitment-Striving | Mean Reversion |
| Optimism/Pessimism | Action Phases | Theory of Reasoned Action | *William James* | Beliefs vs Images |
| Optimism vs Realism | Action Theories | Theory of Planned Behavior | *Ernst E. Boesch* | **Thinking about the Future** |
| Overestimation [Ability] | *Kurt Lewin* | Goal vs Plan | Goal-Behavior Link | *Jerome L. Singer* |
| Causality Belief | Agency Belief | Control Belief | Self-Efficacy Belief | *Eric Klinger* |
| *Victor Frankl* (*1959*) | Humanistic Psychology | *Carolin Showers* | *Steven J. Sherman* | *Darlene E. Goodhart* |
| *Jack W. Brehm* | Energization Theory | *Robert A. Wicklund* | Self-Completion Theory | *Steele* & *Josephs* (1990) |
| *Robert J. Havighurst* | Developmental Task | *Peer M. Gollwitzer* | Deliberative Mindsets | Alcohol Myopia Theory |
| *Martin E.P. Seligman* | Learned Optimism | *Shelley E. Taylor* | (Positive) Self-View | *Fitzsimons* & *Moore* (2008) |
| *Charles R. Snyder* | Hope Theory | *Newell-Simon* (1972) | Theory of Problem-Solving | Question-Behavior Effect |

# ... in the area of positive (& negative) fantasy, mental contrasting, MCII ... [1 of 2]

| Expectation vs Fantasy |
|---|
| CTR (1991) 15.2 |
| Guilford [1996] 236-259 |
| C&P (1997) 3.3 |
| Sage [1999] 315-342 |
| SocCog (2000) 18.2 |
| JPSP (2002) 83.5 |
| Oxford [2006] 120-142 |
| Guilford [2018] 127-149 |
| Oxford [2019] 596-612 |

| Positive Fantasy |
|---|
| CTR (1991) 15.2 |
| Max Planck (1995a) |
| Max Planck (1995b) |
| Guilford [1996] 236-259 |
| Sage [1999] 315-342 |
| Erlbaum [2004] 225-244 |
| Oxford [2006] 120-142 |
| JRP (2011) 45.3 |
| JESP (2011) 47.4 |
| EJSP (2012) 42.1 |
| EJSP (2012) 42.3 |
| PSPB (2012) 38.7 |
| ERSP (2012) 23.1 |
| JCP (2013) 23.1 |
| M&E (2014) 38.1 |
| PSYS (2014) 25.4 |
| Springer [2015] 315-329 |
| Elsevier [2015] 887-893 |

| Positive Fantasy |
|---|
| PSYS (2016) 27.3 |
| RGP (2016) 20.1 |
| Guilford [2016] 547-570 |
| Oxford [2017] 69-79 |
| Guilford [2018] 127-149 |
| Oxford [2019] 596-612 |
| C&E (2019) 34.5 |

| Negative Fantasy |
|---|
| P&H (2010) 25.8 |
| FiP (2017) 8.1596 |
| M&E (2020) 44.2 |

| Mental Contrasting |
|---|
| Guilford [1996] 236-259 |
| C&P (1997) 3.3 |
| P&H (1998) 13.4 |
| Sage [1999] 315-342 |
| IJER (2000) 33.7-8 |
| SocCog (2000) 18.2 |
| JPSP (2001) 80.5 |
| European Commission [2002] |
| PSYI (2002) 13.4 |
| Erlbaum [2004] 225-244 |
| M&E (2005) 29.4 |
| Guilford [2005] 647-665 |
| Oxford [2006] 120-142 |
| APA [2007] 23-47 |

| Mental Contrasting |
|---|
| JCP (2008) 18.2 |
| Elsevier [2008] 191-211 |
| PsycPress [2008] 395-412 |
| SocNeu (2009) 4.1 |
| Guilford [2009] 153-178 |
| PSPB (2009) 35.5 |
| PsycPress [2009] 127-146 |
| EJSP (2009) 39.7 |
| JPerPsy (2010) 9.3 |
| SocCog (2010) 28.4 |
| Guilford [2010] 114-135 |
| P&H (2010) 25.8 |
| Emotion (2011) 11.5 |
| M&E (2011) 35.4 |
| JESP (2012) 48.4 |
| PSPB (2012) 38.7 |
| JESP (2012) 48.5 |
| P&H (2012) 27.S2 |
| ERSP (2012) 23.1 |
| Springer [2013] 19-33 |
| HealthPSY (2013) 32.7 |
| FiP (2013) 4.562 |
| PSPB (2013) 39.9 |
| JESP (2013) 49.5 |
| PSPB (2014) 40.2 |
| Wiley [2014] 236-257 |
| JESP (2014) 54 |
| Elsevier [2015] 887-893 |
| M&E (2015) 39.6 |

| Mental Contrasting |
|---|
| RGP (2016) 20.1 |
| SPPC (2016) 10.11 |
| FiP (2017) 8.1596 |
| SocialPSY (2017) 48.6 |
| Oxford [2017] 69-79 |
| SocialPSY (2018) 49.6 |
| Guilford [2018] 127-149 |
| M&E (2018) 42.1 |
| MOT (2018) 4.2 |
| Oxford [2019] 596-612 |
| PS&E (2019) 45 |
| MOT (2020) 6.2 |
| M&E (2020) 44.3 |
| PSPB (2020) 46.8 |

| Implementation Intention |
|---|
| P&H (1998) 13.4 |
| AMPSY (1999) 54.7 |
| IJER (2000) 33.7-8 |
| European Commission [2002] |
| PSYI (2002) 13.4 |
| Erlbaum [2004] 225-244 |
| Guilford [2004] 211-228 |
| JBDM (2007) 20.1 |
| APA [2007] 23-47 |
| SocCog (2007) 25.2 |
| JCP (2008) 18.2 |
| Elsevier [2008] 191-211 |

# ... in the area of positive (& negative) fantasy, mental contrasting, MCII ... [2 of 2]

| *Implementation Intention* |
|---|
| Oxford [2008] 603-624 |
| SocNeu (2009) 4.1 |
| PsycPress [2009] 127-146 |
| EJSP (2009) 39.7 |
| LID (2010) 20.1 |
| Oxford [2010] 279-296 |
| Guilford [2010] 114-135 |
| Guilford [2011] 162-185 |
| JSCP (2011) 30.6 |
| Oxford [2012] 208-231 |
| Springer-Verlag [2012] |
| Oxford [2013] 221-243 |
| Springer [2013] 19-33 |
| Wiley [2014] 236-257 |
| Elsevier [2015] 887-893 |
| P&H (2016) 31.7 |
| IJPP (2016) 107 |
| PsycPress [2016] 69-84 |
| Guilford [2018] 127-149 |
| Oxford [2018] 90-114 |
| Springer [2019] 23-37 |
| Oxford [2019] 596-612 |

| *MCII* |
|---|
| JCP (2008) 18.2 |
| AJPM (2009) 36.1 |
| Guilford [2009] 153-178 |
| PsycPress [2009] 127-146 |
| HealthPSY (2010) 29.3 |
| Pain (2010) 149.3 |
| Guilford [2010] 114-135 |
| EJSP (2010) 40.7 |
| EduPSY (2011) 31.1 |
| Oxford [2012] 208-231 |
| Routledge [2013] 523-548 |
| M&E (2013) 37.1 |
| IJCM (2013) 24.2 |
| Springer [2013] 19-33 |
| M&E (2013) 37.2 |
| SPPS (2013) 4.6 |
| EJSP (2015) 45.2 |
| FiP (2016) 7.607 |
| CTR (2016) 40.4 |
| JGME (2017) 9.4 |
| Routledge [2017] 418-430 |
| RehabPSY (2017) 62.4 |
| Guilford [2018] 127-149 |
| FiP (2018) 9.838 |
| FiP (2018) 9.1838 |
| HE&B (2019) 46.4 |
| Oxford [2019] 596-612 |
| P&H (2020) 35.3, 275-301 |
| P&H (2020) 35.3, 318-345 |

*... and more to come in the future*!

# ... and a variety of academic domains with ...

| | | | | |
|---|---|---|---|---|
| ***Cultural Factors*** | East vs West Germany | Moscow vs Western | German vs Russian | Multi-Countries |
| Soviet Republics (USSR) | East Germany | West Germany | Poland | Czechoslovakia |
| US (East) | US (West) | Japan (Tokyo) | *Gerard (Geert) Hofstede* | National Culture |
| Individualism/Collectivism | Uncertainty Avoidance | Power Distance | Ernst E. Boesch | Thinking about the Future |
| Cultural Tolerance | ***Relationship Science*** | Relatedness Need | Romantic Relationship | Relationship Conflict |
| Relationship Initiation | Relationship Maintenance | Interpersonal Tolerance | Interpersonal Behavior | ***Education Research*** |
| Kindergarten (Teacher) | Grades 2nd-6th | Age 8-12 | Elementary School | Middle School |
| High-School (Adolescent) | Vocational Training | Higher Education | School Performance | Academic Performance |
| Foreign Language Study | Self-Directed Study Behavior | Academic Help-Seeking | Test Anxiety | Carol S. Dweck |
| ***Public Health*** | Chronic (Back) Pain | Acute Illness | Chronic Illness | Incremental Theory |
| Mid-Aged Women | Pediatric Patients | Elderly Patients | Alcohol Myopia Theory | Alcohol (Ab)use |
| Cancer Patients | Leukemia Cancer | Lymphoma Cancer | Smoking Behavior | (Un)healthy Eating |
| Patient-Provider Comm. | Physicians' Behavior | Professional Nurse | Health Professional | Help-Giving Behavior |
| Healthcare Managers | Medical Adherence | Weight Loss | ***Mental Health*** | Clinician's Behavior |
| Depression Signs | Depressive Disorder | Hope Theory (by Snyder) | Psychotherapy | ADHD-at-Risk Children |
| PTSD Resilience | PTSD Behavior | Spider Phobia | Obesity Risk | ***Sport & Exercise*** |
| ***Social Issues*** | Immigration Integration | Immigration Policy | Minority Ethnicity | Competitive Athletics |
| Gender Effect | Professional Women | Low-Income Area | Low-SES Students | Physical Activity |
| Child Rights | Child Soldiers | War Crime | Human Rights | Domestic Violence |
| ***Politics*** | Executive Politics | American Presidency | Political System | Political Organizations |
| Political Psychology | Political Communication | Election Behaviors | Foreign Policy | International Security |
| ***Organizational Behaviors*** | Career Behaviors | Career Outcomes | Work-Family Conflicts | Political Conflicts |
| Conflict Resolution | Negotiation Behavior | Integrative Bargaining | Project Completion | Project Relinquishment |
| Developmental Tasks | Developmental Goals | Decision Efficiency | Need for Power | Need for Meaning |
| Prosocial Behavior | Middle Managers | Personnel Managers | Healthcare Management | ***Consumer Behavior*** |
| ***Journalism Studies*** | Political Journalism | Business Journalism | Financial Journalism | Cigarette Consumption |
| Sports Journalism | Medical Communication | Business Communication | Political Communication | Snacking Habit |
| ***Interesting Phenomenon*** | Belief-Performance Gap | Life Transition [Job] | Olympic Games | Charitable Giving |

# ... different methodological approaches, including Content Analysis, ...

| Multi-Waves |
| --- |
| IJBD (2003) 27.1 |

| Randomized Controlled Trial |
| --- |
| AJPM (2009) 36.1 |
| HealthPSY (2010) 29.3 |
| Pain (2010) 149.3 |

| Random Assignment |
| --- |
| JPerPsy (2010) 9.3 |
| JESP (2010) 46.3 |
| EduPSY (2011) 31.1 |
| JSCP (2011) 30.6 |
| CTR (2011) 35.5 |
| IJCM (2011) 22.4 |
| M&E (2011) 35.4 |

| Self-Report |
| --- |
| PSPB (2009) 35.5 |
| JPerPsy (2010) 9.3 |
| SocCog (2010) 28.4 |
| JESP (2011) 47.4 |

| (Daily) Diary |
| --- |
| HealthPSY (2010) 29.3 |
| EJSP (2010) 40.7 |

| Experiment [Game] |
| --- |
| JPSP (2004) 86.4 |
| JESP (2010) 46.3 |

| Experiment [Acute Stress] |
| --- |
| PSPB (2009) 35.5 |

| Behavioral Experiment |
| --- |
| Writing Tasks |
| P&H (2010) 25.8 |
| Emotion (2011) 11.5 |

| Behavioral Experiment |
| --- |
| Alcohol Consumption |
| JAbP (2009) 118.3 |

| Behavioral Experiment |
| --- |
| No Water Drinking |
| JESP (2011) 47.4 |

| Questionnaire [Mail] |
| --- |
| SocCog (2010) 28.4 |

| Memory Test |
| --- |
| JESP (2007) 43.1 |

| Critical Thinking Test |
| --- |
| Emotion (2011) 11.5 |

| Mental Exercise |
| --- |
| EJSP (2010) 40.7 |

| Press Conferences |
| --- |
| AMPSY (1988) 43.9 |

| Political Speeches |
| --- |
| AMPSY (1988) 43.9 |

| Sports News |
| --- |
| EJSP (1990) 20.3 |

| Business News |
| --- |
| PSYS (2014) 25.4 |

| Presidential Addresses |
| --- |
| PSYS (2014) 25.4 |
| JLSP (2020) 39.2 |

| MEG Activity |
| --- |
| SocNeu (2009) 4.1 |

| fMRI Test |
| --- |
| JEP(LMC) (2009) 35.4 |

| Music Listening |
| --- |
| Emotion (2011) 11.5 |

| Physiological Measure |
| --- |
| PSPB (2009) 35.5 |
| JESP (2011) 47.4 |

| Systolic Blood Pressure |
| --- |
| PSPB (2009) 35.5 |
| JESP (2011) 47.4 |

| Natural Experiment |
| --- |
| German Reunification |
| JPSP (1994) 66.3 |
| Information Age [2006] |

# ... that helps to effectively change numerous behaviours.

**Weight Reduction**
CTR (1991) 15.2
RehabPSY (2017) 62.4

**Chronic Asthma**
Max Planck (1995)

**Academic Goal**
IJER (2000) 33.7-8

Alcohol (Ab)use
JAbP (2009) 118.3
FiP (2014) 5.169
PAB (2018) 32.7
HE&B (2019) 46.4

**Time Management**
JPerPsy (2010) 9.3
EJSP (2015) 45.2

**ADHD-at-Risk**
M&E (2013) 37.1

**Health Professional**
Psychiatric (2007) 58.3
JPerPsy (2010) 9.3

**Escalation of Commitment**
JBDM (2007) 20.1

**Self-Regulatory Strategies**
Sage [1999] 315-342

**Physical Activity**
HealthPSY (2013) 32.7
RehabPSY (2017) 62.4

**Gastrointestinal Disease**
Max Planck (1995)

**Relationship Initiation**
SocCog (2000) 18.2

**Smoking Behavior**
JAbP (2009) 118.3
P&H (2010) 25.8
P&H (2020) 35.3

**Group Treatment**
CTR (1991) 15.2

**Work-Family Balance**
SocCog (2000) 18.2

**Integrative Bargaining**
IJCM (2013) 24.2

**Physicians' Behavior**
Psychiatric (2007) 58.3

**Progress Decision**
JBDM (2007) 20.1

**Switching Behavior**
JBDM (2007) 20.1

**Preventive Medicine**
AJPM (2009) 36.1
P&H (2010) 25.8

**Joint Intervention**
AJPM (2009) 36.1
HealthPSY (2010) 29.3
Pain (2010) 149.3

**Conciliatory Behavior**
M&E (2020) 44.3

**Unhealthy Eating**
JAbP (2009) 118.3
EJSP (2010) 40.7
FiP (2016) 7.607

**Job Application**
MOT (2018) 4.2

**Academic Performance**
SPPS (2013) 4.6

**Clinician's Behavior**
Psychiatric (2007) 58.3

**Adoption Decision**
JBDM (2007) 20.1

**Multitasking Behavior**
Oxford [2010] 279-296

**Anxiety Regulation**
LID (2010) 20.1
PSPB (2013) 39.5
FiP (2017) 8.1596

**Anger Regulation**
FiP (2018) 9.1838

**Disappointment Regulation**
M&E (2018) 42.1

**Regret Regulation**
M&E (2018) 42.1

**Resentment Regulation**
M&E (2018) 42.1

**Stress Regulation**
FiP (2018) 9.838

**Sleep Behavior**
P&H (2020) 35.3

**Medical Adherence**
APA [2007] 23-47

**Quitting Behavior**
P&H (2010) 25.8

**Studying Behavior**
JGME (2017) 9.4

# Discussions

I expect to introduce the psychology of thinking about the future to *behavioral finance* scholarships.

¶ The fundamental concepts can be shared by the behavioral finance researchers.

– Expectation vs. Fantasy (William James: '*Beliefs* vs. *Images*')

· I may use a two-stage model to distinguish between 'expectation' and 'fantasy' later.

¶ The proven, effective interventions (e.g., mental contrasting, if-then plans, and MCII) should be applied to entrepreneurs too and it'll be interesting to see if it works.

– The known mechanisms behind the psychology of thinking about the future also can be tested.

¶ Thanks to a sea of ready-to-use financial data, I expect to test a few more interesting phenomena in corporate America based on the science of human motivation.

– Y variables: CEO dismissal, shareholder lawsuits, M&A riskiness, bank performance, ...

– X variables: Managerial ability, managerial entrenchment, stock option-based incentives, ...

# Discussions (Cont'd)

I admit the limitations of this study and plan to work on the following issues.

¶ Validate the 'positive future' index.

– I analyzed the corporate historical documents that exhibited '*entrepreneurial* cognition' and naturally it shows the level of '*entrepreneurial* positive future thinking'.

· But I admit that it needs to be validated by independent judges and will present a plan how to do it based on the prior researches.

¶ Validate the dot-com bubble period IPO dates

– The IPO dates at the Compustat and US SEC EDGAR database need to be reconciled. I believe I covered almost 80-90 percent of the sample IPO firms so far.

¶ Further Tests?

– Within the regression models, I may add some robustness checks.

· e.g., falsification tests, change analysis, and additional control variables.

# END OF DOC