## Scott Barry Kaufman, Ph.D.

Positive Psychology Center University of Pennsylvania 3701 Market St., Suite 217 Philadelphia, PA 19104

Email: sbk@psych.upenn.edu

#### **EDUCATION**

## Yale University (New Haven, CT)

Ph.D. in Cognitive Psychology, 2009

M. Phil & M.S. in Cognitive Psychology, 2007

Dissertation Title: Beyond general intelligence: The dual-process theory of human intelligence

Advisors: Jeremy R. Gray & Robert J. Sternberg

## **University of Cambridge (Cambridge, UK)**

M. Phil in Experimental Psychology, 2005

Gates Cambridge Scholar

Thesis Title: The relationship between intelligence and working memory: An individual

differences approach

Advisor: Nicholas J. Mackintosh

## Carnegie Mellon University (Pittsburgh, PA)

B.S., Psychology (Honors) and Human Computer Interaction, 2003

Minor: Music Performance

Honors Thesis Title: *The relationship between expertise and the performance of traditional vs.* 

music series completion problems

Mentors: Anne Fay, Herbert Simon, Randy Paunch

#### **Employment**

May 2014-ongoing Scientific Director

The Imagination Institute
Positive Psychology Center
University of Pennsylvania
(http://imagination-institute.org)

Fall 2010-Spring-2013 Adjunct Assistant Professor of Psychology

Department of Psychology New York University

Fall 2009-Fall 2010 **Post-doctoral fellow** 

Center Leo Apostel for Interdisciplinary Studies

Free University of Brussels (Belgium)

## **Training**

Pre-doctoral fellow, The Edward Zigler Center in Child Development and Social Policy, School of Medicine, Yale University (2005-2008)

### **Grants and Awards**

2014 (in preparation)	Imagination in Action: Documenting in Real Time Very Imaginative Projects of Very Imaginative People; Templeton Religion Trust (Proposed Amount: \$5,700,000)
2014 (awarded)	Advancing the Science of Imagination: Toward an "Imagination Quotient"; John Templeton Foundation (\$5,647,094)
2012	Mensa Excellence in Research Award
2011	Daniel E. Berlyne Award Division 10, American Psychological Association Society for the Psychology of Aesthetics, Creativity, and the Arts
2008	Frank X. Barron Award Division 10, American Psychological Association Society for the Psychology of Aesthetics, Creativity, and the Arts
2006	American Psychological Association Dissertation Research Award
2005	Gates Cambridge Scholarship
2003	Phi Beta Kappa

#### **Books**

Gregoire, C., & Kaufman, S.B. (2015). Beautiful Minds. New York, NY: Penguin.

Paul, E., & Kaufman, S.B. (Eds.) (2013). *The Philosophy of Creativity*. New York, NY: Oxford University Press.

Kaufman, S.B. (2013). *Ungifted: Redefining Intelligence*. New York, NY: Basic Books.

**Kaufman, S.B.** (Eds.) (2013). *The Complexity of Greatness: Beyond Talent and Practice*. New York, NY: Oxford University Press.

Geher, G., & Kaufman, S.B. (2013). *Mating Intelligence Unleashed: The Role of the Mind in Sex, Dating, and Love.* New York, NY: Oxford University Press.

- Sternberg, R.J., & **Kaufman, S.B.** (Eds.) (2011). *The Cambridge Handbook of Intelligence*. Cambridge, UK: Cambridge University Press.
- **Kaufman, S.B.**, & Kaufman, J.C. (Eds.) (2009). *The Psychology of Creative Writing*. Cambridge, UK: Cambridge University Press.

#### **Peer-Reviewed Journal Publications**

- **Kaufman, S.B. (2014)**. A proposed integration of the expert performance and individual differences approaches to the study of elite performance. *Frontiers in Psychology*, 5:707.
- **Kaufman, S.B. (2014)**. Opening up Openness to Experience: A four-factor model and relations to creative achievement in the arts and sciences. *Journal of Creative Behavior*, 47, 233-255.
- McMillan, R., **Kaufman, S.B.**, & Singer, J.L. (2013). Ode to positive constructive daydreaming. *Frontiers in Perception Science*, 4:626.
- Jonason, P.K., **Kaufman, S.B.**, & Geher, G. (2013). What lies beneath the Dark Triad Dirty Dozen: Varied relations with the Big Five. *Individual Differences Research*, 11, 81-90.
- Beaussart, M.L., **Kaufman, S.B.**, & Kaufman, J.C. (2012). Creative activity, personality, mental illness, and short-term mating success. *Journal of Creative Behavior*, 46, 151-167.
- Sternberg, R.J., & Kaufman, S.B. (2012). Trends in intelligence research. *Intelligence*.
- **Kaufman, S.B.**, Reynolds, M.R., Liu, X., Kaufman, A.S., & McGrew, K.S. (2012). Are cognitive *g* and academic achievement *g* one and the same *g*? An exploration on the Woodcock-Johnson and Kaufman tests. *Intelligence*, 40, 123-138.
- **Kaufman, S.B.**, DeYoung, C.G., Reis, D.L., & Gray, J.R. (2011). General intelligence predicts reasoning ability even for evolutionary familiar content. *Intelligence*, *39*, 311-322.
- Kaufman, J. C., **Kaufman, S. B.**, & Lichtenberger, E. O. (2011). Finding creative potential on intelligence tests via divergent production. *Canadian Journal of School Psychology*, *26*, 83-106.
- Peterson, A., Geher, G., & **Kaufman, S.B.** (2011). Predicting preferences for sex acts: Which traits matter most, and why? *Evolutionary Psychology*, *9*, 371-389.
- **Kaufman, S.B.**, DeYoung, C.G., Gray, J.R., & Jiménez, L. (2010). Implicit learning as an ability, *Cognition*, *116*, 321-340.

- Brown, J.B., Aczel, B., Jiménez, L., **Kaufman, S.B.**, Mackintosh, N., & Plaisted, K. (2010). Implicit learning in autism spectrum disorder. *Quarterly Journal of Experimental Psychology*, 1, 1-23.
- Pretz, J.E., Totz, K.S., & **Kaufman, S.B.** (2010). The effects of mood, cognitive style, and cognitive ability on implicit learning. *Learning and Individual Differences*, 20, 215-219.
- Geher, G., O'Brien, D.T., Gallup, A.C., **Kaufman, S.B.,** & Garcia, J.R. (2010). Self perceived mating intelligence predicts sexual behavior in college students: Empirical validation of a theoretical construct. *Imagination, Cognition, and Personality, 29, 341-362*.
- Protzko, J., & **Kaufman, S.B.** (2010). Review of The Genius in All of Us: Why Everything You've been Told About Genetics, Talent, and IQ is Wrong by David Shenk, *Psychology of Aesthetics, Creativity, and the Arts, 4*, 255-258.
- **Kaufman, S.B.**, DeYoung, C.G., Gray, J.R., Brown, J., & Mackintosh, N. (2009).

  Associative learning predicts intelligence above and beyond working memory and processing speed. *Intelligence*, *37*, 374-382.
- **Kaufman, S.B.** (2009). Faith in intuition is associated with decreased latent inhibition in a sample of high achieving adolescents. *Psychology of Aesthetics, Creativity, and the Arts, 3,* 28-34.
- **Kaufman, S.B.**, & Kaufman, J.C. (2009). Putting the parts together: integrative look at the psychology of creative writing. In S.B. Kaufman & J.C. Kaufman (Eds.), *The Psychology of Creative Writing*. Cambridge, UK: Cambridge University Press.
- **Kaufman, S.B.**, Christopher, E.M., & Kaufman, J.C. (2008). The genius portfolio: How do poets earn their creative reputations from multiple products?, *Empirical Studies of the Arts*, 26, 181-196. \*Formed the basis for the Frank X. Barron Award
- Kozbelt, A. & Kaufman, S.B. (2008). Review of The Psychology of Humor: An Integrative Approach, *Psychology of Aesthetics, Creativity, and the Arts, 2, 184-185.*
- **Kaufman, S.B.** (2008). Commentary: Intuition and creative cognition. *Periodicals of implicit cognition*, 1, 5-6.
- **Kaufman, S.B.**, & Kaufman, J.C. (2007). Ten years to expertise, ten more to greatness: An investigation of modern writers, *Journal of Creative Behavior*, 41, 114-124.
- Kaufman, S.B. (2007). Sex differences in mental rotation and spatial visualization ability: can they be accounted for by differences in working memory capacity? *Intelligence*, 35, 211-223. \*#2 Hottest Article on ScienceDirect (<a href="http://top25.sciencedirect.com/">http://top25.sciencedirect.com/</a>) in July-September 2007

- **Kaufman, S.B.** (2007). Commentary: Investigating the role of domain general mechanisms in the acquisition of domain specific expertise. *High Ability Studies, 18,* 71-73.
- **Kaufman, S.B.** (2007). Review of Explaining Creativity: The Science of Human Innovation. *Psychology of Aesthetics, Creativity, and the Arts*, 1, 47-48.
- **Kaufman, S.B.** (2006-2007). Review of Creativity from Constraints: The Psychology of Breakthrough. *Imagination, Cognition, and Personality*, 26, 273-278.
- **Kaufman, S.B.**, & Singer, J.L. (2004). Applying the theory of successful intelligence to psychotherapy training and practice. *Imagination, Cognition, and Personality, 23*, 325-355.

## **Invited Book Chapters**

- Kozbelt, A., **Kaufman, S.B.**, Walder, D., Ospina, L., & Kim, J. (2014). Evolutionary genetics of the creativity-psychosis association. In J.C. Kaufman (Ed.), *New ideas about an old topic: Creativity and mental illness*. New York, NY: Cambridge University Press.
- Eskine, K.J., & Kaufman, S.B. (2013). Grounding creative giftedness in the body. To appear in Kim, K.H., Kaufman, J.C., Baer, J., & Sriraman, B. (Eds.), *Creatively gifted students are not like other gifted students: Research, theory, and practice.* The Netherlands: Sense Publishers.
- Kaufman, J.C., **Kaufman, S.B.**, & Plucker, J.A. (2013). Contemporary theories of intelligence. In J. Reisberg (Ed.), *The Oxford Handbook of Cognitive Psychology*. New York, NY: Oxford University Press.
- Forgeard, M. J. C., **Kaufman, S. B.**, & Kaufman, J. C. (2013). The psychology of creative writing. In G. Harper (Ed.), *Blackwell companion to creative writing*. Oxford: Wiley-Blackwell.
- **Kaufman, S.B.** (2011). Intelligence and the cognitive unconscious. To appear in R.J. Sternberg & S.B. Kaufman (Eds.), *The Cambridge Handbook of Intelligence*. Cambridge, UK: Cambridge University Press.
- Geher, G., & Kaufman, S.B. (2011). Mating intelligence. To appear in R.J. Sternberg & S.B. Kaufman (Eds.), *The Cambridge Handbook of Intelligence*. Cambridge, UK: Cambridge University Press.
- Gabora, L., & **Kaufman, S.B.** (2010). Evolutionary approaches to creativity. To appear in R.J. Sternberg & J.C. Kaufman (Eds.), The *Cambridge Handbook of Creativity*. Cambridge, UK: Cambridge University Press.
- **Kaufman, S..B.**, & Kozbelt, A. (2009). The tears of a clown: Understanding comedy

- writers. In S.B. Kaufman & J.C. Kaufman (Eds.), *The Psychology of Creative Writing*. Cambridge, UK: Cambridge University Press.
- Kaufman, J.C., **Kaufman, S.B.**, Beghetto, R.A., Burgess, S.A., & Persson, R.S. (2009). Creative giftedness: beginnings, developments, and future promises. In L. Shavinina (Ed.), *International Handbook on Giftedness*. Springer Science.
- **Kaufman, S.B.**, & Sternberg, R.J. (2008). Conceptions of giftedness. In S. Pfeiffer (Ed.), Handbook of Giftedness in Children: Psycho-educational Theory, Research, and Best Practices (pp. 71-91). New York: Plenum.
- **Kaufman, S.B.**, Kozbelt, A., Bromley, M.L., & Miller, G.F. (2008). The role of creativity and humor in human mate selection. In G. Geher & G. Miller (Eds.), *Mating Intelligence: Sex, Relationships, and the Mind's Reproductive System* (pp. 227-262). Mahwah, NJ: Lawrence Erlbaum.
- **Kaufman, S.B.**, & Sternberg, R.J. (2007). Giftedness in the Euro-American culture. In S.N. Phillipson & M. McCann (Eds.), *Conceptions of Giftedness: Socio-cultural Perspectives* (pp. 377-413). Mahwah, NJ: Lawrence Erlbaum.

## **Encyclopedia/Bibliography Entries**

- **Kaufman, S.B.** (2011). Intelligence. *Oxford Bibliographies Online*: Education.
- **Kaufman, S.B.** (2007). Creativity. In C.R. Reynolds & Fletcher-Janzen, E. (Eds). *Encyclopedia of Special Education* (3rd ed.). New York: Wiley.
- **Kaufman, S.B.** (2007). Genius. In C.R. Reynolds & Fletcher-Janzen, E. (Eds). *Encyclopedia of Special Education* (3rd ed.). New York: Wiley.
- **Kaufman, S.B.**, Evans, M.L., Kaufman, J.C. (in press). Gifted Education. To appear in C. Clauss-Ehlers (Ed.), *Encyclopedia of Cross-Cultural School Psychology*. Springer Science.

### **Manuscripts Under Review or In Preparation**

- Forgeard, M.J.C., **Kaufman, S.B.**, & Seligman, E.P. (under review). Aging and creativity: What we can make with what we have left. *Behavioral and Brain Sciences*.
- **Kaufman, S.B.**, Quilty, L., Grazioplene, R., Hirsh, J., Gray, J., Peterson, J., & DeYoung, C. (under review). Openness to Experience and Intellect differentially predict creative achievement in the arts and sciences. *Journal of Personality*.
- Kaufman, S.B., Kozbelt, A., Silvia, P., Kaufman, J.C., Ramesh, S., & Feist, G.J. (under review).

- Who finds Bill Gates sexy? Creative mate preferences as a function of cognitive ability, personality, and creative achievement. *Journal of Creative Behavior*.
- **Kaufman, S.B.**, Ryan, S.G., Wertz, C., Vakhtin, A., Flores, R.A., & Jung, R.E. (in preparation). Cortical thinning correlates of openness to experience.
- Grohman, M., Silvia, P., Ivcevic, P., & **Kaufman, S.B.** (in preparation). Gritty Creativity? Evaluating the role of grit in everyday creativity and creative achievement.

#### **Invited Lectures**

- August 14, 2014- Collin College- From Evaluation to Inspiration, Plano, TX.
- September 8, 2014- LEGO- Development of Play in Children. Billund, Denmark
- July 17, 2014- Vision 2020 Education Conference- From Evaluation to Inspiration, Oklahoma City, OK
- June 26-30, 2014- Aspen Ideas Festival- From Evaluation to Inspiration, Aspen, Colorado
- June 10<sup>th</sup>, 2014- NeoCon 2014- From Evaluation to Inspiration, Chicago, IL
- June 4th, 2014- Lucid NYC- From Evaluation to Inspiration, Manhattan, NY
- May 20<sup>th</sup>, 2014- Independent Schools Admissions Association of Greater New York (ISAAGNY)- *From Evaluation to Inspiration*, Manhattan, NY
- May 15<sup>th</sup>, 2014- MetroHealth From Evaluation to Inspiration, Cleveland, OH
- April 25, 2014- National Partnership for Educational Access (NPEA) Conference- *From Evaluation to Inspiration*, Minneapolis, MN
- May 1<sup>st</sup>, 2014 Best of Out-Of-School Time (BOOST) Conference *From Evaluation to Inspiration*, Palm Springs, CA
- May 7, 2014- UK Sport- The Complexity of Greatness, Manhattan, NY
- May 10, 2014- Learning & the Brain Conference ("Smarter, Thinking Brains: Teaching Students Thinking Skills for Common Core and Careers")- *From Evaluation to Inspiration*, Manhattan, NY
- April 1, 2014- Princeton Public Library ("Inside the Child's Mind Speaker Series")- From Evaluation to Inspiration, Princeton, NJ
- March 26, 2014- SUNY New Paltz- From Evaluation to Inspiration, New Paltz, NY

- March 5, 2014- Haldane Central School District- From Evaluation to Inspiration, Cold Spring, NY
- March 6, 2014- 92Y- The Genius Debate: Identifying the Origins of Genius- Manhattan, NY
- February 26, 2014- Fraser Valley Regional Library- *From Evaluation to Inspiration*, Langley Civic Facility, British Columbia
- January 23rd, 2014- Temple Sinai From Evaluation to Inspiration, Roslyn Heights, NY
- October 25, 2013- PopTech ("Sparks of Brilliance")- From Evaluation to Inspiration, Camden, MA
- October 29, 2013- South Orange-Maplewood School District- *From Evaluation to Inspiration*, South Mountain School Cafeteria
- November 16, 2013- TEDx Manhattan Beach ("Imagine That!")- From Evaluation to Inspiration, Manhattan Beach, CA
- December 16, 2013- TIES 2013 Education Technology Conference From Evaluation to Inspiration, Minneapolis, MN
- April 2013- Bioethics Forum- *The Neuroscience of Creativity, Flow, and Openness to Experience,* Madison, WI.
- February, 2013- Learning & the Brain Conference- *Ungifted: Intelligence Redefined*, San Francisco, California.
- February, 2013- Union College- *The Creative Personality*, Schenectady, New York.
- August, 2012- American Psychological Association- *Shining the Spotlight on Openness*, Berlyne Award Address. Orlando, FL.
- June, 2011- 4<sup>th</sup> Annual World Children's Festival- Pretend Play, Imagination, and Creativity, Washington D.C.
- May, 2010- Spatial Learning Conference- *Understanding the Role of Working Memory on Gender Differences in Spatial Skills*, Harvard University, Cambridge, MA.
- April 2010- Brooklyn College of The City University of New York- *Intelligence and Implicit Cognition*, New York, New York.
- March, 2010- Max Planck Institute for Human Development- *Implicit Learning and Intelligence*, Berlin, Germany.
- August, 2008- American Psychological Association Conference- Facing Future: New Voices in

- Aesthetics, Creativity, and the Arts. Boston, Massachusetts.
- September, 2010- 2010 World Exhibition Times of Entanglement symposium *Creativity, Openness to Experience, and the Unconscious Mind.* Shanghai, China.
- April, 2008- A Tale of Two Minds: Implications for Intelligence, Reasoning, and Creativity. *Evolutionary Seminar Series,* State University of New York at New Paltz.
- February, 2006- Yale University Cognitive Lunch- Gender Differences in Mental Rotation and Spatial Visualization Ability: Can They Be Accounted for by Differences in Working Memory Capacity?- New Haven, CT.

#### **Conference Presentations**

- Grohman, M.G., Kaufman, S.B., & Silvia, P. (2014, August). *Grit, Conscientiousness, and Openness to Experience in Creative Achievement*. American Psychological Association Conference, Washington, D.C.
- Kaufman, S.B. (2014, February). *Openness to Experience*. International Neuropsychological Society, Seattle, Washington.
- June, 2010. Paul, E., & Kaufman, S.B. Creativity: A neglected virtue. Presentation at the meeting of the *Society for Philosophy and Psychology*, Portland, Oregon.
- Kaufman, S.B. (2013, July-August). Perceptions and prophecies: The influence of labels on developmental trajectories of creativity. Presentation at the *American Psychological Association* conference, Honolulu, Hawaii.
- Kaufman, S.B. (2013, April). Rethinking intelligence in light of the default network. Presentation at the *American Educational Research Association* conference, San Francisco, California.
- Kaufman, S.B. (2011, July). Breaking down the Openness/Intellect domain: A four-factor model and relations with cognition, disposition, and creative achievement. Presentation at the *International Society for the Study of Individual Differences* Conference, University of London's Institute of Education, London.
- Kaufman, S.B. (2011, June). Breaking down the Openness/Intellect domain: A four-factor model and relations with cognition, disposition, and creative achievement. *Association for Research in Personality* Conference, Riverside, California.
- Kaufman, S.B., Singer, J.L., & Russ, S. (2011, May). From children's pretend play to cognitive, social skills, and creativity. Presentation at the *Creativity, Play, and the Imagination across Disciplines* Conference, Teachers College, Columbia University.
- Kaufman, S.B., Liu, X., McGrew, K., & Kaufman, S.B. (2010, August). What is the relation between cognitive *g* and academic *g*? Paper presented at the meeting of

- the American Psychological Association Annual Convention, San Diego, California.
- Kaufman, S.B., Erickson, J., Ramesh, S., Kozbelt, A., Magee, M., & Kaufman, J.C. (2010 July). What are funny people like? Paper presented at the *Annual Meeting of the Human Behavior and Evolution Society* (HBES), Eugene, Oregon.
- Kaufman, S.B., Erickson, J.E., Huang, J.Y., Ramesh, S., Thompson, S., Kozbelt, A., Paul, E., & Kaufman, J.C. (2009 July). Art as an Aphrodisiac. *Northeastern Evolutionary Psychology Society*, Oswego, New York.
- Geher, G., & Kaufman, S.B. (2008 February). Mating intelligence: Sex, relationships, and the mind's reproductive system. *Yale Sex Week*, New Haven, CT.
- Kaufman, S.B. (2008 May). Intelligence, reasoning, and the cognitive unconscious: An individual differences approach. Paper presented at the *Northeastern Evolutionary Society Conference*, University of New Hampshire, New Hampshire.
- Jiménez, L.; Kaufman, S.B. & DeYoung, C.G. (2008 April). Diferencias individuales ena prendizaje implícito [Inidividual differences in Implicit Learning]. Talk presented at the 7th. Conference of the Spanish Society for Experimental Psychology, San Sebastián (Spain), April, 3th5th. Abstract published in M. Miguele s and E. García Bajos (Eds.) Actas 7º Congreso de la Sociedad Española de Psicología Experimental, SEPEX, San Sebastián, p. 63.
- Kaufman, S.B., & Christopher, E.M. (2006 Summer). The genius portfolio. Paper presented at the *American Psychological Association Conference*, New Orleans, Lousiana.
- Kaufman, S.B., Bromley, M.L., & Kaufman, J.C. (2006 Summer). For the love of the muse. Paper presented at the *Human Behavior and Evolution Society Conference*, Philadelphia, Pennsylvania.
- Kaufman, S.B. (2004 November). Applying the theory of successful intelligence to psychotherapy training and practice. *University of Cambridge Experimental Psychology Department Colloquium for the Ian McClaren Laboratory*, Cambridge, UK.
- Kaufman, S.B., & Singer, J.L. (2004 May). Applying the theory of successful intelligence to psychotherapy training and practice. *PACE Center of Yale University Abilities, Competencies, and Expertise Colloquium*, Cambridge, UK.
- Kaufman, S.B., Fay, A.L. (2002 May). The relationship between expertise and the performance of traditional vs. music series completion problems. Paper presented at the *European Society for the Cognitive Sciences of Music Conference*, Liege, Belgium.
- Gottlieb, J., Kaufman, S.B. (2001 June). How information is organized in semantic memory. Paper presented at the 2001 Annual Conference of the *American*

## **Teaching Experience**

Fall 2010, 2012, 2013 Cognitive Psychology
Summer 2011, 2013 New York University

Adjunct Assistant Professor

Summer, 2013 **Human Intelligence** 

Spring 2011 New York University

Adjunct Assistant Professor

Summer 2009 Introduction to Cognitive Science

Yale University

Lecturer

Spring 2007 **Personality Psychology** 

Yale University
Teaching Fellow

Instructor: Marc Brackett

Delivered guest lecture on creativity

Fall 2007 **Developmental Psychology** 

Yale University
Teaching Fellow
Instructor: Frank Keil

Led weekly 50-minute discussion section

Fall 2005 Introductory Psychology

Yale University
Teaching Fellow

Instructor: Marc Brackett

Fall 2004-Spring 2005 **IQ and Human Intelligence** 

University of Cambridge

Gave 1-on-1 and group supervisions Instructor: Nicholas J. Mackintosh

#### Service

Beautiful Minds, Column, Scientific American (2013-ongoing)

Co-founder, *The Creativity Post* (<a href="http://creativitypost.com">http://creativitypost.com</a>) (2011-ongoing)

Advisor, *The Future Project* (<a href="http://thefutureproject.org">http://thefutureproject.org</a>) (2011-ongoing)

Student Representative, (2005-2007), Division 10, American Psychological Association Society for the Psychology of Aesthetics, Creativity, and the Arts

# **Professional Lineage**

*Undergraduate mentors*: Anne Fay, Herbert Simon, and Randy Pausch, Carnegie Mellon University

M. Phil advisor: Nicholas J. Mackintosh, University of Cambridge

Ph.D. advisors: Jeremy R. Gray and Robert J. Sternberg, Yale University

Postdoctoral director: Diederik Aerts, Center Leo Apostel, Free University of Brussels