David Jané Kyle[1] & Saara Koikkalainen[1,2]

(1) Sociology and the Gifford Center for Population Studies, UCD
(2) University of Lapland

Cognitive Migration:
The Role of Mental Simulation
in the (Hot) Cultural Cognition of Migration Decisions

This paper is part of the Decision Making for a Social World webconference

Organized by the International Cognition and Culture Institute and
the Philosophy, Politics and Economics Program at the University of Pennsylvania

The paper is followed by a **discussion**

"Imagination is more important than knowledge. Knowledge is limited. Imagination encircles the world."

--Albert Einstein

Introduction[1]

This programmatic paper introduces the novel empirical concept of "cognitive migration" to better understand the role of the prospective imagination, or mental simulation, in the decision-making process before major mobility events to a new neighborhood, city, or country. These are typically some of the handful of intrinsically risky "big decisions" we make in life, though we may not always experience them as such. The paper proceeds in four sections. First, relying on existing social science approaches, we describe the problem of how to understand the particularly risky decision to migrate abroad without authorization; Second, we review briefly some of the recent work in social cognitive and decision sciences that could potentially be brought to bear on our case, though undeveloped in the social science migration literature; Third, we describe *cognitive migration*, and, hence, *cognitive migrants*, as a concept that allows us to capture a significant, yet largely unidentified temporally-distinct part of migration decision-making amenable to a cultural or social cognitive approach (how our social world affects cognition and vice versa); Lastly, we offer initial *s*upport for this empirical concept from recent cognitive and neuro-scientific research on emotions and develop some hypotheses regarding the determinants and effects of cognitive migration--as opposed to the physical migration event itself. We argue that family, friends, recruiters, and smugglers may provoke a less rational (cost-benefit) mode of reasoning and, instead, elicit cognitive migration as we negotiate an imagined social future that *feels* right.

Understanding Risky Migration Decisions: The Case of Illegal Migration

It is likely that billions of people around the world are now aware that migration abroad may increase their earnings along with other opportunities for social mobility. And yet the vast majority does not seriously entertain international migration; though, to be sure, urbanization via domestic migration has been a hallmark of the past century. While it may be true that migrants mostly move from poorer to wealthier countries following an economic logic, researchers across several decades have consistently found that those who migrate are not the poorest of the poor and represent a special, self-selected minority.

This is also true of illegal/irregular/undocumented migrants, who are often willing to risk their lives and borrowed smuggling fees. That is, currently there are tens of millions of non-criminal migrants who do not follow the models on which state migration policies are based, with far-reaching political ramifications for migrants and non-migrants alike. Many who "should" be leaving for greener pastures do not, while their often better-off counterparts in other regions take some of the riskiest journeys to destinations where they are not welcome. In both the empirical research and policy literatures on international migration, this central mystery or gap is well known.

How are we to understand the unauthorized migration decision embedded within a particular socio-cultural context? To what extent is it a "decision" at all by individual agents? While most state policies and social science theories lean heavily upon assumptions of rationality (maximizing human capital) or the social forces of family and friends (social capital and information flowing within trusted networks), the empirical reality of this complex decision is not entirely understood with either under-socialized or over-socialized models.

Like many life-altering migration decisions many of us take in life, this is a risky decision with potentially big consequences. The punitive politico-legal environment in which a migration choice appears today is likely to also involve professional smugglers and other migration merchants responding to informal market opportunities connecting foreign workers with employers, refugees with freedom. Thus, a strategic trust in others and a social imagination are as important to would-be migrants as the known or imagined pros and cons of the destination.

The bulk of empirical migration research has thus far focused on explaining and understanding migration phenomena as something to be observed after the mobility has taken place, especially the adaptation and integration process. Migration researchers are often content with describing the qualities or attributes of migrants after arrival rather than looking at individuals and households contemplating their life options prior to migration, which would necessarily including a much larger population in origin regions (or even regions with little out-migration at all). Given the wider disciplinary context whereby cognitive considerations have largely been relegated to psychology, social scientists have rarely problematized migratory decision-making as an *empirical* object of inquiry, as opposed to survey research describing the attributes of migrants vs. non-migrants and their social ties within networks and other social boundaries.

In general, we have lacked the conceptual language to allow us to bridge the cognitive and social sciences in our understanding of why people migrate, especially under extreme risk. In addition, disciplinary cultures of social inquiry have either assumed away the decision as one of rational agency or, in contrast, argued that individual agency/choice is a mere illusion as local, national, and global structures of power and cultures of oppression guide the migrants' paths. To be sure, anthropological studies have explored the imaginations and visions of particular would-be migrants, but with little conceptualizing of the cognitive dimension.

In the following sections we touch on cognitive approaches to "rational" decision-making or how we vary from the logical choice; some are directed at the level of the universal brain, including research on cognitive biases, some focus on more psychological individualistic approaches, and a growing middle ground explores the cognitive sociology or cultural cognition of perception, choice, and agency.

Between Cognitive Universalism and Cognitive Individualism[2]

Quirks of the Universal Brain

A set of social and cognitive science theories and concepts assert universal claims about human social behavior, including the assumption of rational choice by

---

[2] This typology of "cognitive universalism" and "cognitive individualism" derives from Zerubavel, 1999.

individual actors or the irrational quirks of the brain that we, nonetheless, share. Increasingly, subfields such as behavioral economics have demonstrated the numerous flaws or oddities in our subjective judgment when faced with a "logical choice." These include cognitive or information-processing biases, social biases, as well as emotional self-protective mechanisms (Griffin 1988). Nobel laureate Daniel Kahneman and Amos Tversky have inspired much of this work in the diverse fields of cognitive science, behavioral economics, political science, and neuroscience among others. There is nearly a book a month on related topics published for general audiences.[3]

Empirical research widely demonstrates that humans make consistent errors in thinking, judgment and memory due to certain cognitive illusions or biases. They lead to a perception, judgment, or memory that reliably deviates, in a predictable manner, from 'reality' or the normative standard if a simple computer algorithm were making the choice at hand (Pohl 2004, 2-3.) This feature of human reasoning is neatly summarized by Reid Hastie & Robyn Dawes (2010) as follows: "We not only under-appreciate uncertainty in the world outside of us; we are also prone to illusions of consistency, reliability, and certainty about the world inside our own heads. There can be no doubt that we think we are more logical, rational, and consistent than we really are" (Hastie & Dawes 2010, 325). If we accept that many human decisions cannot be characterized as the actions of rational agents who carefully calculate the economic and psychological costs and benefits of their actions—even in laboratory experiments faced with limited choices—then these "brain quirks" must surely also shape complex mobility decisions. There are some studies that have looked at cognitive biases loosely connected to the field of ethnicity and immigration, but none that fully examine the mobility decision itself (Hamilton Krieger 1995, Lee & Ottat 2002, Rubin, Paolini & Crisp 2010, Rydgren 2007 and Reskin 2000). How we incorporate these insights from research on dozens of known cognitive biases into the real-life setting of migration research has yet to be developed.

---

[3] For academically based, yet popularly written books on how we (humans) make decisions (see Lehrer 2009) or choices (see Iyengar 2010), are predictably irrational (see Ariely 2008), how mistakes of reasoning rule our minds (see Piattelli-Palmarini 1994) or how to nudge people into making decisions (see Thaler & Sunstein 2009).

Dispositions of the Individual Mind

Previous attempts at understanding migrant decision-making from a psychological perspective have mostly emanated from the other end of the conceptual spectrum, namely a type of cognitive individualism to the extent that this set of concepts and models of human behavior explicate an individual's cognition and behavior rather than the universal traits of the human brain. This diverse but somewhat limited literature relies mostly on personality traits or the social psychology of the group dynamics, though much of it is about the settlement experience. A general bibliographic search for a *"psychology of migration"* produces results related to understanding attitudes towards immigrants and ethnic minorities, immigrant acculturation and stress related to adjusting to the new society and culture and inter-group relations between immigrants and host country residents (see for example Berry 2001). To our knowledge, empirical psychological research on migration decision-making with real-life migrants is scarce[4].

However, there are some studies that have looked at personality characteristics and motivation in search of a "migrant personality" (Boneva & Hanson Frieze 2001, Polek 2007). Boneva & Hanson Frieze (2001) argue that "…unfavorable economies in the country of origin, emigration and immigration policies, network support in the receiving country, and other environmental factors create the conditions for wanting to leave, but desires to do so are based in the personality of those who make the choice" (Boneva & Hanson Frieze 2001, 478). Madison (2006), on the other hand, has introduced a concept called existential migration, which he uses to explain the motivations of individuals who choose to leave their homeland voluntarily to become foreigners.

Where is the Middle Ground?

Sociologists such as Eviatar Zerubavel (1999) and Rogers Brubaker et al (2004) have also introduced research agendas in the field of cognitive sociology and on the cognitive turn in the study of ethnicity respectively. While research done within both of these traditions is related to our agenda, it does not fill the gap we note in the

---

[4] For a recent study focusing on how migrants rationalize their decisions see Ullah 2010.

current understanding of migration decision-making. Migration theory could benefit from a "cognitive turn" examining migrant decision-making in multiple countries, thus widening the subject pool of social cognitive science research.[5]

In the past half-century or so, researchers from psychology, geography, anthropology, and planning and computer science have tried to understand how humans perceive and behave in geographic space (Kitchin & Blades 2002). "Cognitive maps" have been used in human geography to study how we perceive the spatial environment, also in the context of migration and mobility research (Golledge 1980, Gärling & Golledge 2002, and Hedberg 2007), though it's development has been uneven within geography.

Nearly all of these approaches are either confined to controlled experiments detached from the realities of, say, a teenager living in rural Mexico caught between a region crushed by economic and environmental change, on the one hand, and a possibly deadly, illegal journey across the Sonoran desert of Arizona after incurring a smuggling debt, on the other. The middle ground of cognitive social sciences emerging in several sub-fields, potentially drawing on psychological, sociological, and neuroscientific research has remained largely descriptive, lacking an integrative conceptual space and empirical agenda regarding perception, agency, choice, networks, and decision-making.

Cognitive Migration as the Second Migration Moment: Definition and Context

We propose that a large group, if not the vast majority, of potential migrants engage in what we label "cognitive migration" as they actively imagine themselves socially and emotionally in a particular place in the future--days, weeks, or months before we actually "decide" to physically migrate. *That is, quite often our minds have migrated many times before our bodies do so--and this may be very useful analytically to the extent it is true.* We leverage this fact to explore it's potential usefulness for explaining a range of risky migration decisions many of us make in life, including at times those that may bend or break immigration or labor laws. We believe this little
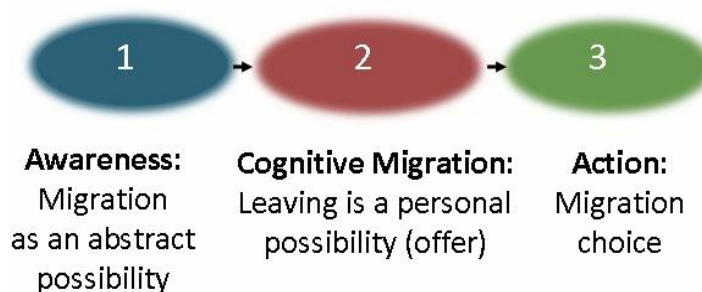
---

[5] See Henrich et al 2010 on the reliance on mainly Western research subjects to generalize on what human reasoning is like.

understood socio-cognitive dimension (though often alluded to in such concepts as the "American Dream") is useful for developing a sociologically-informed cultural cognitive research agenda concerning choice and decision-making in the context of very risky, emotionally-laden, major decisions such as the cross-border mobility by those who, typically, are not in life-threatening situations such as internally-displaced refugees fleeing conflict and persecution.

Beyond the abstract perception of one's mobility options, we focus on that phase in the decision-making process starting from the realization that migration is a personal possibility (*I* can go, or, someone is telling me I should go) until the actual "decision" event of leaving or not leaving has taken place. The decision to leave is not only shaped by the calculation of destination pros and cons, but also involves the use of prospective imagination. Big, life-changing decisions, such as resettlement abroad, include a deeply social dimension: our social world provides us with a menu of acceptable choices framing the decision to be made. By engaging in mental time travel into our possible personal futures we work out the highly complex emotional and social impacts of that decision.

We argue that the decision to migrate unfolds in three stages, or *migration moments*: Most people do not jump directly from knowing about the abstract possibilities and opportunities of living abroad (migration moment 1) to directly making the move happen (migration moment 3)—cognitive migration represents a critical intervening stage that requires further investigation (migration moment 2).

THREE MIGRATION MOMENTS

Awareness: Migration as an abstract possibility

Cognitive Migration: Leaving is a personal possibility (offer)

Action: Migration choice

The length of time spent thinking about a future abroad may be less important than the fact that we eventually come to the profound experience of emotional certainty about what the choice is (some people can make the decision to move within

hours or days, while others ponder the issue for years). It is also likely that there is variation in what makes the imagined future abroad feel like the right choice. This decision process represents both the social and deeply personal dimension of migration: what will my life be like in a new country? How will my actions affect others around me – how will loved ones and others view me in that future? Will my family and children benefit more if I stay or go? Does the imagined future abroad *feel* right?

To summarize, we argue that those contemplating migration engage in *cognitive migration,* visualizing themselves in a future time and place. We define cognitive migration as the phase of decision-making in which the experimental imagination actively negotiates one's future social worlds and, hence, emotional states. Logically, there are many more cognitive migrants than actual migrants.

The growing research on the nexus of emotions and social imagination in decision-making is very useful as an empirical foundation for our concept of cognitive migration. In the following section, we discuss the strong foundation in recent related neuroscientific research on decision-making, emotions, and mental simulations (projection) and a possible research agenda based on hypotheses that flow from an inquiry into the causes and consequences of cognitive migration.

Why Cognitive Migration? Empirical Support and Future Research

Though time confines us all to be living physically in the present, our minds are constantly ranging over the social landscape of time. It is a common feature of human cognition to spend a considerable amount of our time in some form of *mental time travel*: remembering the past (i.e. retrospection) and imagining possible future events (i.e. prospection). Understanding the processes of imagination and mental simulation has benefited from research in a wide variety of disciplines, such as neuroscience, cognitive, social, developmental, and clinical psychology.[6] The various cognitive processes involved adhere around the concept of mental simulation, which can be defined as "…an act of imagination and the generation of alternative realities (Markman, Klein & Suhr 2009, vii)."

---

[6] For a valuable overview, see Markman, Klein & Suhr (2009) *Handbook of Mental Simulation,* combining recent research from a variety of disciplines and sub-specialties.

One line of research explores how we engage in counterfactual thinking, and contemplate possible 'what-if' scenarios (Byrne 2005). When making decisions, we play out different possibilities in our head, attempting to find out how we shall feel and what the future will be like if we choose one option over another.[7]

Kathleen M. Galotti (2007) described five different studies focusing on different decision-making situations, noting, "In making real-life decisions, people appear to constrain the amount of information, and especially the number of options that they actively consider" (Galotti 2007, 322). She draws on the "image theory" developed by Lee Roy Beach (1990, 1998), who argues that when making decisions, individuals first limit the different options to a manageable number. These options are then tested against three images: *the value image* reflecting the persons' principles, *the trajectory image* representing the adopted goals and hopes for the future, and *the strategic image* constituted by the plans and strategies that one wishes to use to attain the trajectory image goals. Having made these evaluations, the individual then proceeds to choosing the best option available and making forecasts of future events based on adopting the chosen plan of action (Beach 1998, 12-13.)

The concept of *episodic memory,* or the way we remember specific, though emotionally complete episodes, is also relevant for our purposes, as it is understood as a constructive system that enables the simulation of both the past and the future. The concept of cognitive migration is related to what Atance and O'Neill (2001) have called *episodic future thinking*, i.e. projection of the self into the future to pre-experience an event. They conclude that future research should look into how individual differences in the ability to project oneself into the future has an effect on behavioral outcomes (Atance & O'Neill 2001, 533-6, see also Szpunar & McDermott 2008.)

A separate, but parallel research agenda examines the linkage between emotions and decision-making. Research into the psychology of emotions has shown that "affective states have a powerful influence on the way we perceive and respond to social situations (Forgas 2009, 596)." Lowenstein & Lehner (2009, 620) conclude that emotions play a role in decision-making in two ways: as *expected emotions*, predictions of the emotional consequences of one's actions and as *immediate emotions* that are

---

[7] The linkage between imagination and migration has been discussed at least by Appadurai 1996, Thorsen 2010, Halfacree 2004, Teo 2003 and Teo 2003b.

experienced when the decision is made. Both of these types of emotions are surely present when one thinks of embarking on a risky journey to an unknown destination abroad. However, the extent to which our affective imagination plays a role in decision-making is still poorly understood, though of increasing interest.

We argue that when making a life-altering decision such as embarking on international or even regional migration, the individual has to be certain on an emotional and psychological level of the consequences of one's actions. In order to do so, potential migrants engage in episodic future thinking (Atance & O'Neill 2001, see also Szpunar 2010) to pre-experience a possible future abroad. This mental time travel can take many forms, but the key factor is that it includes affective forecasting (Lowenstein & Lerner 2003, Dunn et al 2009), trying out different situations or images that can help one determine what one's future self would feel in the given context.

Mental time travel into a possible future in a different country shapes a personal narrative on how one's life is likely to proceed. Once the individual is convinced that moving is the right choice, one will have to explain his/ her narrative to others affected by his/ her choice. Selling one's vision to others is no small task, as often the resources of one's family have to be invested into financing the international move. In this case, the individual migrant's kin will have to share his/ her conviction that moving is the right choice; that is, the migrant's kin and friends may also imagine similar or different outcomes for the would-be migrant. It is also often the case that family members "make the decision" to send a son, daughter, or spouse, an area ripe for exploring the transference of an imagined future not simply a zero-sum game of agency and power.

Hypotheses and Future Research

Finally, there is much to be explored in related areas of research and, especially, future research specifically designed to explore the role of cognitive migration in major mobility decisions, nearly all of which involve high levels of risk (though we may not experience it that way subjectively). We may usefully imagine three broad areas of hypothesizing and future research, offered below: (1) Why cognitive migration, what purpose does it serve in general terms?; (2) What initiates or elicits cognitive migration

and to what degree are we, or can we be, in control of this "decision"? (3) What is its correlation and causal relationship to physical migration?

(1) Why cognitive migration, what purpose does it serve in general terms?

Making a good decision is qualitatively different from making a rational or logical decision as it relates to imagined social and emotional outcomes. Cognitive migration expresses this social cognitive need for acceptance and status in the future, which is not entirely possible through a cost-benefit calculus; like Dicken's "A Christmas Carol," the future must be conjured up so that we can empathize with our future selves. It may also be through mental simulation that some of the cognitive bias and other psychological theories of decision-making may be usefully employed.

(2) What initiates or elicits cognitive migration and to what degree are we, or can we be, in control of this "decision"?

Cognitive migration may be correlated to "hot decisions," that is, decisions associated with the hot cognition of heightened emotional (limbic) arousal, symbolic complexity, and hyper-attention to social cues.[8] Social networks and social contagion theories may suggest not so much the contagion of migration per se, but the mechanisms by which some are made offers and thus face "hot," emotionally-laden decisions, while others do not have that opportunity (or burden). *Thus, the existence of a growing migration industry with a range of intermediaries, brokers, and smugglers, may elicit cognitive migration as it becomes known that one can pay for a clandestine or unauthorized passage with future earnings* (Kyle 2000). Given that the role of social networks has been prominent in the migration literature for decades, it may be that one's social networks better explain cognitive migration than the actual migration event.

(3) What is its causal relationship, or independent effect on physical migration?

Currently, we know little about when the decision to migrate is actually taken or becomes a real decision in one's mind. We propose that cognitive migration is a

---

[8]This is a reference to Robert Ableson's famous notion of "hot" vs. "cold" cognition or thought.

significant and common feature of decision-making, though it has not been identified as such until now. We suspect, however, that even in cases where the decision has to be made on the spot, the mature internal narrative about the future must give the individual the emotional strength and rational cover to make the right choice—one justifiable to one's family and friends. This also raises the possibility to identify a tipping point whereby the cognitive migrant has in fact already made the decision, though she is not aware of this or experience it as a decision.

What role does personality and related psychological concepts play in how we project our future social worlds and are moved to take action? When thinking about the future, people tend to be overly optimistic about what is likely to happen (Newby-Clark & Ross 2003), though with individual variations. There are, however, clearly individual differences in how the future is perceived or constructed. How much does objective reality or new information influence the decision once cognitive migration has reduced the "decision" to a concrete vision and feeling about the future time and place? Do some people see themselves immune from the most negative of outcomes, and are therefore able to place their life in the hands of human smugglers, while others cannot overcome their fear of change?

Much of the existing cognitive approaches to behavior we've discussed could speak to these questions, especially combined with nearly a century of social scientific research on migration. There are many more potential questions raised by the implications of cognitive migration embedded within social milieus. Our primary argument is that this type of experimental imagination of our social futures, especially under highly emotional situations of risky journeys leaving an equally risky status quo, warrants further experimental and in situ investigations within the programmatic frameworks of cognitive sociology and cultural cognition.

References

Abelson, R. P. (1963). *"Computer Simulation of 'Hot Cognition',"* in S. S. Tomkins & S. Messick (Eds.), *Computer Simulation of Personality* (pp. 277-302). New York: Wiley.

Appadurai, Arjun (1996) *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis: University of Minnesota Press.

Atance, Christina M. and O'Neill, Daniela K. (2001) 'Episodic Future Thinking' Trends in Cognitive Sciences. Vol 5, Issue 12, 533-539. doi:10.1016/S1364-6613(00)01804-0

Ariely, Dan (2008) *Predictably Irrational. The Hidden Forces That Shape Our Decisions*. New York, NY: HarperCollins Publishers.

Beach, Lee Roy (1990) *Image Theory: Decision Making in Personal and Organizational contexts.* New York, NY: Wiley.

Beach, Lee Roy (Ed.) (1998) *Image Theory: Theoretical and empirical foundations.* Mahwah, NJ: Erlbaum.

Berry, John W. (2001), 'A Psychology of Immigration'. *Journal of Social Issues*, 57: 615–631. doi: 10.1111/0022-4537.00231

Boneva, Bonka S. & Hanson Frieze, Irene (2001) 'Toward a Concept of a Migrant Personality', *Journal of Social Issues*, Vol. 57, No. 3, 477–491

Brubaker, Rogers, Loveman, Mara & Stamatov, Peter (2004) 'Ethnicity as Cognition.' *Theory and Society* 33 [1] (2004): 31-64.

Byrne, Ruth M. J. (2005) *The Rational Imagination. How People Create Alternatives to Reality*. Cambridge, MA: MIT Press.

Dunn, Elizabeth W, Forrin, Noah, D, Ashton-James, Claire, E. (2009). 'On the excessive rationality of the emotional imagination: A two-systems account of affective forecasts and experiences'. In Markman, K.D., Klein, W.M.P., & Suhr, J.A. *The Handbook of Imagination and Mental Simulation*. New York: Psychology Press.

Forgas, Joseph P. (2009)'Affective influences on attitudes and judgments' in Davidson, R.J., Scherer, K.R. & Goldsmith, H.H., editors, *Handbook of Affective Sciences*, Oxford: Oxford University Press, 596-518.

Galotti, Kathleen M. (2007) 'Decision Structuring in Important Real-Life Choices', *Psychological Science* 2007 Vol 18, No. 4, 320-325.

Golledge, R. G. (1980). A behavioral view of mobility and migration research. *Professional Geographer*, Vol 32, No1, 14-21 DOI: 10.1111/j.0033-0124.1980.00014.x

Griffin, D. (1988) Intuitive Judgment and the Evaluation of Evidence. In *Enhancing Human Performance: Background Papers, Issues of Theory and Methodology*, Committee on Techniques for the Enhancement of Human Performance, National Research Council, 99-148. The National Academies Press. http://books.nap.edu/catalog.php?record_id=779#toc. (Accessed 5 May 2010.)

Gärling, Tommy & Golledge, Reginald G. (2002) Cognitive mapping and spatial decision-making. In Kitchin, Rob & Freundschuh, Scott (eds.) *Cognitive Mapping. Past, present and future.* Routledge, New York, NY

Hamilton Krieger, L (1995) 'The Content of Our Categories: A Cognitive Bias Approach to Discrimination and Equal Employment Opportunity', *Stanford Law Review*, Vol. 47, No. 6 (Jul., 1995), 1161-1248, http://www.jstor.org/stable/1229191

Halfacree K. (2004) 'A utopian imagination in migration's *Terra Incognita*? Acknowledging the noneconomic worlds of migration decision-making'. *Population, Space and Place* 10, 239–253.

Hastie, Reid & Dawes, Robyn M. (2010) *Rational Choice in an Uncertain World: the Psychology of Jugdment and Decision Making* (2nd edition). Thousand Oaks, CA: Sage Publications.

Hedberg, Charlotta (2007) 'Direction Sweden: migration fields and cognitive distances of Finland Swedes'. *Population, Space and Place*, Vol 13, No 6, 455-470.

Henrich, Joe, Heine, Steven J. and Norenzayan, Ara (2010) *The Weirdest People in the World?* RatSWD Working Paper No. 139. Available at SSRN: http://ssrn.com/abstract=1601785 (Accessed 19.7.2010)

Iyengar, Sheena (2010) *The Art of Choosing.* New York, NY: Twelve, Hachette Book Group.

Kitchin, Rob, and Blades, Mark (2002) *The Cognition of Geographic Space*. New York, NY: I.B. Tauris & Co.

Kyle, David. 2000. *Transnational Peasants: Migrations, Networks, and Ethnicity in Andean Ecuador*. Baltimore: Johns Hopkins University Press.

Lee, Y-T & Ottat, V. (2002) 'Attitudes Toward U.S. Immigration Policy: The Roles of In-Group-Out-Group Bias, Economic Concern, and Obedience to Law.' *The Journal of Social Psychology*, Vol 142, No 5, 617-634.

Lehrer, Jonah (2009) *How we decide?* New York, NY: Houghton Mifflin Harcourt Publishing Company.

Lowenstein, George A. & Lerner, Jennifer S. (2009). 'The Role of Affect in Decision Making', in Davidson, R.J., Scherer, K.R. & Goldsmith, H.H., editors, *Handbook of Affective Sciences*, Oxford: Oxford University Press, 619-642.

Madison, Greg (2006) 'Existential Migration. Conceptualising out of the experiential depths of choosing to leave'home''. *Existential Analysis* Vol 12, No 2, 238-260.

Markman, Keith D, and Klein, William M.P. & Suhr, Julie A. (2009) 'Overview' in Markman, Keith D, and Klein, William M.P. (eds.) *Handbook of imagination and mental simulation*, New York, NY: Psychology Press.

Newby-Clark, and Ross, Michael (2003) 'Conceiving the Past and Future', *Personal and Social Psychology Bulletin*, Vol 29, No. 7, 807-818. DOI: 10.1177/0146167203029007001.

Ochsner, Kevin N.; Lieberman, Matthew D. (2001) 'The emergence of social cognitive neuroscience'. *American Psychologist*, Vol 56 (9), 2001, 717-734.

Parker, David (2006) 'Neuroscience and society', *The Interdisciplinary Journal of Social Sciences,* Vol. 1, No. 2.

Piattelli-Palmarini, Massimo (1994) *Inevitable Illusions. How Mistakes of Reasoning Rule Our Minds*. New York, NY: John Wiley & Sons, Inc.

Pohl, Rüdiger F. (ed.) (2004) *Cognitive Illusions. A Handbook on Fallacies and Biases in Thinking, Judgment and Memory*. New York: Psychology Press, Taylor & Francis Group.

Reskin, Barbara (2000) 'The Proximate Causes of Employment Discrimination' *Contemporary Sociology*, Vol. 29, No. 2 (Mar., 2000), 319-328 http://www.jstor.org/stable/2654387

Rubin, M, Paolini, S, Crisp, R.J. (2010) 'A processing fluency explanation of bias against migrants' *Journal of Experimental Social Psychology*, 46, 21-28.

Rydgren, Jens (2007) 'The Power of the Past: A Contribution to a Cognitive Sociology of Ethnic Conflict', *Sociological Theory* 25, No. 3, 225-244.

Szpunar, K.K. & McDermott, Kathleen.B. (2008). 'Episodic future thought and its relation to remembering: Evidence from ratings of subjective experience'. *Consciousness and Cognition*, Vol 17, 330-334.

Szpunar, K.K. (2010). 'Episodic future thought: An emerging concept'. *Perspectives on Psychological Science*, Vol 5, 142-162.

Teo, Sin Yih (2003a) *Imagining Canada: Tracing the Cultural Logics of Migration Amongst PRC Immigrants in Vancouver.* January 2003 MA thesis, Department of Geography, Faculty of Graduate Studies. University of British Columbia. http://circle.ubc.ca/handle/2429/13953 (Accessed 15.8.2010)

Teo, Sin Yih (2003b) 'Dreaming Inside a Walled City: Imagination, Gender and the Roots of Immigration'. *Asian and Pacific Migration Journal* [apmj]. Vol 12, no. 4, 411-438.

Thaler, Richard H. & Sunstein, Cass R. (2009) *Nudge. Improving Decisions about Health, Wealth, and Happiness.* Revised and expanded edition. London: Penguin Books.

Thorsen, D. (2010) 'The Place of Migration in Girl's Imagination', *Journal of Comparative Family Studies*, Vol. 41 No. 2, 265-280.

Ullah, AKM Ahsan 2010. *Rationalizing Migration Decisions. Labour Migrants in East and South-East Asia.* Aldershot: Ashgate Publishing.

Zerubavel, Eviatar (1999) *Social Mindscapes. An Invitation to Cognitive Sociology.* Cambridge, MA: Harvard University Press.