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Refugee Status Determination and the Limits of Memory

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Abstract

Refugee status decision makers typically have unreasonable expectations of what and how people remember. Many assume that our minds record all aspects of the events that we experience, and that these memories are stored in our brains and remain unchanged over time. Decades of psychological research has demonstrated, however, that our memories are neither so complete nor so stable, even setting aside the effects on memory of trauma and stress. Whole categories of information are difficult to recall accurately, if at all: temporal information, such as dates, frequency, duration and sequence; the appearance of common objects; discrete instances of repeated events; peripheral information; proper names; and the verbatim wording of verbal exchanges. In addition, our autobiographical memories change over time, and may change significantly. As a result, while gaps or inconsistencies in a claimant's testimony may in some cases properly lead to a negative credibility finding, such aspects are often misleading and should never be used mechanically, and the bar must be set much lower. Many decision makers must fundamentally readjust their thinking about claimants' memories if they are to avoid making findings that are as unsound as they are unjust.

1. Introduction

'A refugee claim should not be determined on the basis of a memory test'.[1]

Refugee status decision makers typically have unreasonable expectations of what and how people remember. Members of the Refugee Protection Division of Canada's Immigration and Refugee Board (IRB/the Board), for example, often subscribe to the common lay notion that 'Memory is like a video recording of your observations that can be played back at ill to remind you of what you saw'.[2] Yet, even setting aside the effects on memory of trauma and stress,[3] decades of research has established beyond any doubt that human memory is nothing like a video recording, that it is neither as complete nor as stable as this folk theory implies. As a result, decision makers far too often make findings that are as unsound as they are unjust.

The first section of this article highlights common failures of memory that are relevant to the refugee determination process: memory for time (dates, duration, frequency and sequence); common objects; repeated events; peripheral information; names; and verbatim memory. The second explores how memory changes over time, and concludes by noting that the test conditions at the IRB likely contribute to the inconsistency of claimants' memories. Although the examples throughout are taken from Canada's refugee determination system, the points made apply equally to the refugee determination systems of other countries.

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[1] *Sheikh v. Canada (Minister of Citizenship and Immigration)* [2000] FCJ No. 568 at para. 28 (Federal Court of Canada).

[2] R. N. Haber & L. Haber, 'Experiencing, remembering and reporting events' (2000) 6 *Psychology, Public Policy and Law* 1057-97 at 1057.

[3] Although this is a vast topic beyond the scope of this article, it is worth noting that the gaps and changes described below, and characteristic of memory in general, will typically be amplified when psychologically vulnerable people remember and relate upsetting experiences, especially under stressful circumstances. For a review, see, J. Herlihy & S. W. Turner, 'The Psychology of Seeking Protection' (2009) 21 *IJRL* 171-92; J. Cohen, 'Errors of recall and credibility: Can omissions and discrepancies in successive statements reasonably be said to undermine credibility of testimony' (2001) 69 *Medico-Legal Journal* 25-34.

2. Availability/Accessibility

Certain categories of information are not encoded in our memories, or are encoded but are not easily accessed. In reconstructing our memories of events, we have trouble recalling such information accurately, if at all.[4]

2.1 Time

After many years of studies, researchers agree that in remembering we have access to 'very little temporal information'.[5] There is no question that we can remember events in considerable detail and still have only a vague idea of when they happened, or how often, or for how long, or in what order.

2.1.1 Dates

When we remember an event, our ability to assign a date to it is nearly always based on 'inference, estimation and guesswork'.[6] With enough 'clues to the correct answer',[7] we may be able to reconstruct when the event must have taken place,[8] but since our guesses are only as good as our clues, they are often not very good at all. In fact, as study upon study have shown, 'the dates that individuals assign to their past events are rarely accurate'.[9]

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[4] Psychologists theorize that we reconstruct our memories each time we bring them to mind: 'Recent memory theory suggests that memories are not stored units of information, as we used to think, but that the recall of events and information is a process of reconstruction'. Herlihy 2009, above n. 3, 179.

[5] C. D. B. Burt, 'Time, language, and autobiographical memory' (2008) 58 *Language Learning* 123-41 at 123 (Burt, Time). For a review, see, W. J. Friedman, 'Memory for the time of past events' (1993) 113 *Psychological Bulletin* 44-66.

[6] G. Cohen & R. Java, 'Memory for medical history: Accuracy of recall' (1995) 9 *Applied Cognitive Psychology* 273-88 at 274; see also, J. J. Skowronski & C. P. Thompson, 'Reconstructing the dates of personal events: Gender differences in accuracy' (1990) 4 *Applied Cognitive Psychology* 371-81.

[7] N. R. Brown, L. J. Rips & S. K. Shevell, 'The subjective dates of natural events in very-long-term memory' (1985) 17 *Cognitive Psychology* 139-77 at 172.

[8] For a review, see, A. L. Betz & J. J. Skowronski, 'Self-events and other-events: Temporal dating and event memory' (1997) 25 *Memory C Cognition* 701-14.

[9] Burt, Time 2008, above n. 5, 129; Skowronski 1990, above n. 6, 377; see also, S. M. J. Janssen, A. G. Chessa & J. M. J. Murre, 'Memory for time: How people date events' (2006) 34 *Memory and Cognition* 138-47.

Several studies have suggested that our ability to date autobiographical events may be stronger than for other types of events.[10] Even so, when people are asked to keep diaries for four months, for example, and are then asked at the end of those four months to date the events that they have described, they are regularly off by up to three months.[11] In one study, when subjects were asked, after three months of recording their health histories, to date a specific illness or ailment, they could guess to within two weeks only half of the time.[12] 'The consistent finding', across all of the research to date, 'is that after about 2 weeks, individuals have difficulty accurately dating their past experiences, suggesting that date of occurrence information is typically not retained in memory'[13] – and our trouble only increases as time passes.[14]

Some studies suggest that unusual and memorable events may be dated more accurately than unremarkable ones.[15] Others, however, have found that memories for such events are more easily influenced by certain dating biases, such as a tendency to believe that the events happened more recently than they did, perhaps because we are able to remember more about them.[16] Still others have found no significant difference in our ability to date unusual as opposed to everyday events.[17] Regardless, even unusual personal events can be subject to 'massive' dating errors.[18] In one study, for example, subjects had significant trouble dating correctly a number of intrusive medical procedures that they had undergone between two and six months previously, such as colon cancer tests and cervical smears. Many participants incorrectly reported that

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[10] Betz 1997, above n. 8; S. F. Larsen & C. P. Thompson, 'Reconstructive memory in the dating of personal and public news events' (1995) 23 *Memory C Cognition* 780-90.

[11] C. P. Thompson, 'Memory for unique personal events: The roommate study' (1982) 10 *Memory C Cognition* 324-32 at 324; see also, M. S. Shum, 'The role of temporal landmarks in autobiographical memory processes' (2000) 124 *Psychological Bulletin* 423-42 at 435.

[12] Cohen 1995, above n. 6.

[13] Burt, Time 2008, above n. 5, 129; W. A. Wagenaar, 'My memory: A study of autobiographical memory over six years' (1986) 18 *Cognitive Psychology* 225-52; M. Linton, 'Memory for real-world events' in D. A. Norman & D. E. Rumelhart (eds.), *Explorations in cognition* (San Francisco: 1975), 376-404 in Burt, Time 2008, above n. 5.

[14] C. R. Barclay & H. M. Wellman, 'Accuracies and inaccuracies in autobiographical memories' (1986) 25 *Journal of Memory and Language* 93-103 at 100; C. P. Thompson, J. J. Skowronski & D. J. Lee, 'Telescoping in dating naturally occurring events' (1988) 16 *Memory C Cognition* 461-8; Cohen 1995, above n. 6, 284; W. J. Friedman, 'Time in autobiographical memory' (2004) 22 *Social Cognition* 591-605.

[15] Betz 1997, above n. 8, 711.

[16] Brown 1985, above n. 7.

[17] B. Means & E. F. Loftus, 'When personal history repeats itself: Decomposing memories for recurring events' (1991) 5 *Applied Cognitive Psychology* 297-318.

[18] E. F. Loftus, M. R. Klinger, K. D. Smith & J. Fiedler, 'A tale of two questions: Benefits of asking more than one question' (1990) 54 *Public Opinion Quarterly* 330-45 at 339-40.

they had undergone these procedures within the last two months, meaning that their estimates were off by up to four months.[19]

We seem to have even more trouble dating public events, even 'recent and important ones' like bombings or political assassinations,[20] or highly sensational media events. In one study that asked participants to date important public events from the last five years, the subjects' estimates were off on average by eleven months.[21] In another, eight months after the O. J. Simpson verdict, people who had watched the trial and who reported having been at least to some degree emotionally invested in the outcome were asked to date it. The subjects' responses ranged from underestimates of five months to overestimates of thirty-four months. Although the event had occurred eight months earlier, some thought that it had happened three months earlier, some three and a half years earlier.[22]

This type of evidence clearly calls into question a finding that a claimant is not credible because, some twenty years later, he cannot remember the precise date of the Tiananmen Square self-immolations,[23] or whether a particular personal relationship had begun at 'the beginning of July, the middle of July, or the end of July' several years previously.[24] With 'deliberate, repeated attention' we can, of course, commit certain

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[19] Ibid. One team of researchers commenting upon this study suggests that these errors are likely caused by 'the overestimation of the frequency of events occurring during a given time period', as discussed in the next section, rather than by 'errors in the estimated date of the occurrence for specific events': Thompson 1988, above n. 14, 461. Regardless, the result is the same: the subjects' date estimates were significantly inaccurate.

[20] Brown 1985, above n. 7, 139.

[21] Ibid., 150.

[22] S. Bluck, L. J. Levine & T. M. Laulhere, 'Autobiographical remembering and hypermnesia: A comparison of older and younger adults' (1999) 14 *Psychology and Aging* 671-82. One study that, in contrast, concluded that its subjects were 'very accurate' in dating past news events, counted responses as 'correct' if the subjects could date a news event that had occurred within the last nine months to within one month: W. J. Friedman & J. Huttenlocher, 'Memory for the time of "60 Minutes" stories and news events' (1997) 23 *Journal of Experimental Psychology: Learning, Memory, and Cognition* 560-9.

[23] *Qian v. Canada (Minister of Citizenship and Immigration)* [2007] FCJ No. 1282. The cases cited throughout this article provide representative examples of the IRB's reasoning about various aspects of memory. In some, the point at issue was solely determinative of the claim (as in *Zavalat*, below n. 27, at para. 63, where the Court noted that the Board's decision was 'an inverted pyramid. In the end, everything can be traced back to one discrepancy in dates'). More often, the point emphasized here was one of several factors that the Board relied on in rejecting the claim. Regardless of how these findings weighed in the final decision, in light of the evidence presented in this article they simply have no place in a refugee status determination.

[24] *Charles v. Canada (Minister of Citizenship and Immigration)* [2004] FCJ No. 2131 at para. 9

dates to memory in the same way that we memorize our capital cities or our multiplication tables.[25] Many of us make an effort to remember, for example, 'the years in which we graduated from high school, married and our children were born'.[26] Given this, the question for a refugee claimant often becomes: is it plausible that a person has failed to commit to memory the date he or a family member was arrested?[27] Or the date of her gang rape?[28] Or the date a loved one was murdered?[29]

The dates that a person will commit to memory are highly individual and can be surprising. Nine months after the third largest earthquake in Ohio's history, a moderate one, but one that nonetheless caused injuries, property damage and evacuations,[30] local residents were off by about two months on average when asked to date it.[31] Researchers comparing the memories of concentration camp survivors with the camp's records found that not only had some of the survivors failed to commit to memory the date of their imprisonment but, in guessing, several were off by six months, which, as the researchers noted, placed this event in a different season: 'one witness declared: "It was not quite winter, but late fall; so it must have been November or December". In reality he had arrived in July'.[32] Another study interviewed thirteen witnesses to a murder four to five months after the event. These men and women had watched a man get shot to death in front of them, but ten out of the thirteen could not get the month right.[33]

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[25] Friedman 1993, above n. 5, 54.

[26] Friedman 2004, above n.14, 597.

[27] *Etemadifard v. Canada (Minister of Citizenship and Immigration)* [1995] FCJ No. 666; *Ojo v. Canada (Minister of Citizenship and Immigration)* [1997] FCJ No. 1006; *Samseen v. Canada (Minister of Citizenship and Immigration)* [2006] FCJ No. 727; *Zavalat v. Canada (Minister of Citizenship and Immigration)* [2009] FCJ No. 1639.

[28] *Akter v. Canada (Minister of Citizenship and Immigration)* [2006] FCJ No. 1517.

[29] *Kadder v. Canada (Minister of Citizenship and Immigration)* [2005] FCJ No. 1047; *Angandeh v. Canada (Minister of Citizenship and Immigration)* [2002] FCJ No. 1345.

[30] M. C. Hansen, 'January 1986 Northeastern Ohio Earthquake' (Summer 1986) *Ohio Geology Newsletter* 2-5.

[31] W. J. Friedman, 'A follow-up to "Scale effects in memory for the time of events": The earthquake study' (1987) 15 *Memory C Cognition* 518-20.

[32] W. A. Wagenaar & J. Groeneweg, 'The memory of concentration camp survivors' (1990) 4 *Applied Cognitive Psychology* 77-87 at 81. This was admittedly a distant memory for these subjects, but a life-altering one, and the researchers noted that for other types of details their memories were often 'remarkably accurate', 84.

[33] J. C. Yuille & J. L Cutshall, 'A case study of eyewitness memory of a crime' (1986) 71 *Journal of Applied Psychology* 291-301; see also, S.A. Christianson & B. Hübinette, 'Hands up! A study of witnesses' emotional reactions and memories associated with bank robberies' (1993) 7 *Applied Cognitive Psychology* 365-79. There is some evidence to suggest, in fact, that our ability to date personal events is worse for negative events than for positive ones, a 'positivity bias' that has been termed the 'Pollyanna principle': Betz 1997, above n. 8, 703; Wagenaar 1986, above n. 13; H. L.

The fact that we do not reliably commit even traumatic dates to memory has long been a 'major methodological problem in survey research' and a primary concern of survey methodologists.[34] Researchers who want to learn, for example, whether over the last six months the rate of unreported crime has gone up or down need to be confident that the people they are surveying are remembering accurately when the events they are describing occurred. A quarter of a century ago such researchers realized that we often do not reliably memorize the dates of serious assaults we have suffered. When they compared their subjects' accounts of reported crime with the police records, they found that 20 per cent of the reported dates were wrong.[35] One study asked its subjects, 'During the last 6 months, did anyone beat you up, attack you, or hit you with something such as a rock or bottle?' Of those who reported such an assault, 28 per cent got the date wrong.[36] The researchers soon figured out that they could obtain a more accurate response by defining their time boundaries with memorable events rather than with dates. The classic 1983 study that made this point was entitled: 'Since the eruption of Mt. St. Helens, has anyone beaten you up?'[37]

Researchers know that it takes a memorable event, such as a volcano erupting, to help us remember when we were assaulted. Yet Members of the IRB routinely find it implausible that claimants have not memorized the precise dates of their assaults,[38] or, for that matter, the date that their mother's business was shut down,[39] the anniversary of their church parish,[40] or even their siblings' birthdays.[41] In one unusual case, the claimant could not remember the date of birth of her only child. She could not remember his age, approximately how old he was, or how many years into her marriage he was born – not that the latter

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Williams, M. A. Conway & G. Cohen, 'Autobiographical memory' in G. Cohen & M. A. Conway (eds.), *Memory in the real world* (New York: 2008), 21-90 at 41.

[34] Thompson 1988, above n. 14, 461.

[35] J. Garofalo & M. J. Hindelang, 'An introduction to the National Crime Survey' (1977) US Department of Justice, Washington DC, in E. F. Loftus & W. Marburger, 'Since the eruption of Mt. St. Helens, has anyone beaten you up? Improving the accuracy of retrospective reports with landmark events' (1983) 11 *Memory C Cognition* 114-20 at 115.

[36] Loftus 1983, ibid., 116.

[37] Ibid.

[38] See, e.g.: *Baker v. Canada (Minister of Citizenship and Immigration)* [2002] FCJ No. 1200; *Adegbola v. Canada (Minister of Citizenship and Immigration)* [2007] FCJ No. 693.

[39] *Omrane v. Canada (Minister of Citizenship and Immigration)* [2003] FCJ No. 405.

[40] *Kidimbu v. Canada (Minister of Citizenship and Immigration)* [1995] FCJ No. 50.

[41] *Udeagbala v. Canada (Minister of Citizenship and Immigration)* [2003] FCJ No. 1906.

would have helped, because she gave inconsistent testimony as to the date of her marriage. As the Federal Court of Canada noted, 'it appears that the only date that she truly remembers is her date of birth'. From this, the IRB concluded: 'we do not believe in the existence of her son'.[42] The IRB concluded that this claimant, having invented a son, lacked the wherewithal to invent a birthday for him. The research on temporal memory suggests a more plausible explanation. For this claimant, from a rural background and with little formal education, this type of temporal information may have had little value. For most of our history as a species, our lives were tied to cycles, to naturally recurring patterns, such as growing seasons and migratory and fertility cycles. Linear time is a relatively new addition to our collective consciousness and 'mapping psychological time onto clock and calendar time' is a 'very recent' phenomenon.[43] Even today, in cultures where 'clock and calendar time' are hugely emphasized, including specific dates in everyday conversation 'would seem irrelevantly detailed to any listener'.[44] As Friedman, a leading authority on temporal memory, has concluded, 'The absolute distance of an event in the linear past is nearly always useless information'.[45] Except in a refugee claim, where it can be a matter of life and death.

2.1.2 Frequency

'How often did you go to the movies last year?' 'How many times a month do you eat at a restaurant?' How would you go about answering these questions? How accurate would your answer be?

To answer questions like these you would be unlikely to 'simply retrieve relevant incidents and count them'.[46] Instead of using a 'recall-and-count' procedure, we arrive at our estimates by making educated guesses, using a combination of strategies that depend on the 'complex interplay' of a number of variables.[47] Tversky and Kahneman famously posited that we

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[42] *Kaur v. Canada (Minister of Citizenship and Immigration)* [2005] FCJ No. 2112 at para. 11.

[43] D. B. Wright & E. F. Loftus, 'Eyewitness memory' in Cohen 2008, above n. 33, 91-105 at 98.

[44] J. R. Sehulster, 'Content and temporal structure of autobiographical knowledge: Remembering twenty-five seasons at the Metropolitan Opera' (1989) 17 *Memory C Cognition* 590-606 at 605.

[45] Friedman 1993, above n. 5, 60.

[46] N. M. Bradburn, L. J. Rips, S. K. Shevell, 'Answering autobiographical questions: The impact of memory and inference on surveys' (1987) 236 *Science, New Series* 157-61 at 159.

[47] R. F. Belli, 'The structure of autobiographical memory and the event history calendar: Potential improvements in the quality of retrospective reports in surveys' (1998) 6 *Memory* 383-406 at 384; for a review, see, Means 1991, above n. 17; D. Bruce & M. van Pelt, 'Memories of a bicycle tour' (1989) 3

may base our estimates of the frequency of recurring events in part on the ease with which we bring these events to mind, a theory called the 'availability heuristic':[48] when we can remember a type of event clearly, we may infer that it must have occurred frequently. Others have theorized that our estimates may be affected by how often we call the events in question to mind, that we may tend 'to confuse occasions when an event occurred and occasions when the event was thought about'.[49]

However we go about estimating frequency, we are simply not very good at it. Our estimates are 'known to be inaccurate' at best, and their accuracy declines with time.[50] From the point of view of survey methodologists, who depend on this kind of information to learn about our lives, the accuracy of our frequency estimates is 'distressingly low'.[51] When subjects try to estimate how often they used bank machines or wrote cheques in the past week, or how often they got B's in university, or how often in the recent past they bought specific types of groceries, their estimates are typically off by about 50 per cent.[52] Even for fairly serious personal matters, our frequency recall is poor. In one study, when subjects kept diaries of their health for three months, and tried afterwards to recall how often they had been ill, they could do so with about 65 per cent accuracy.[53] As the researchers note, since these subjects had been recording this information at the time, and since many suspected that they would be tested at the study's conclusion, it is likely that under natural circumstances their memory 'would be even poorer'.[54]

Yet Members of the IRB find it implausible that, after many years of

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Applied Cognitive Psychology 137-56.

[48] A. Tversky & D. Kahneman, 'Judgment under uncertainty: Heuristics and biases' (1974) 185 *Science, New Series* 1124-31 at 1127; see also, Brown 1985, above n. 7, 142.

[49] Cohen 1995, above n. 6, 274; M. Johnson & C. L. Raye, 'Reality monitoring' (1981) 88 *Psychological Review* 67-85

[50] Cohen 1995, above n. 6.

[51] S. Burton & E. Blair, 'Task conditions, response formulations processes, and response accuracy for behavioral frequency questions in surveys' (1991) 55 *The Public Opinion Quarterly* 50-79 at 76; see also, Cohen 1995, above n. 6, 274; J. B. Jobe & D. J. Mingay, 'Cognition and survey measurement: History and overview' (1991) 5 *Applied Cognitive Psychology* 175-92 at 179-80.

[52] Burton 1991, ibid.; S. Sudman, 'On the accuracy of recording of consumer panels' (1962) 1 *Journal of Marketing Research* 69-83 in S. Sudman, A. Finn & L. Lannom, 'The use of bounded recall procedures in single interviews' (1984) *48 Public Opinion Quarterly* 520-4 at 522.

[53] Cohen 1995, above n. 6, 281

[54] Ibid., 284.

'repeated death threats', the claimant 'had difficulty saying how many times he had been threatened';[55] or that the claimant could not say how many times, on one occasion, police officers had insulted her using vulgar language: 'she was evasive stating that she could not remember' (later she added 'that's the way police spoke');[56] or the Member concludes that a claimant is being 'vague, evasive and hesitant' because he cannot specify under oath the number of political party meetings that he attended, dismissing his explanation: 'I attended several of them. I cannot remember the number'.[57] The warning given by memory researchers to survey methodologists applies equally well to refugee status decision makers:

> Survey researchers are often after the kind of quantitative, autobiographical information that taxes even the most cooperative respondents' mental abilities. Recall is not dependable. Inference, which helps fill in the details that respondents cannot recall, is at best inexact and at worst misleading.[58]

2.1.3 Duration

The principal conclusion to be drawn from the 'vast literature on the estimation of duration'[59] is that these types of memory reconstructions are 'often inaccurate'.[60]

Early studies showed, for example, that their subjects displayed a 'consistent tendency' to overestimate the length of hospital stays;[61] that mothers tended to underestimate the duration of their labour,[62] but tended to overestimate how long they had breastfed their children;[63] that some crime witnesses dramatically overestimated the time that it

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[55] *Morales v. Canada (Minister of Citizenship and Immigration)* [2006] FCJ No. 609 at paras. 2, 4.
[56] *Joseph v. Canada (Minister of Citizenship and Immigration)* [2000] FCJ No. 49 at para. 18.
[57] *Garande v. Canada (Minister of Citizenship and Immigration)* [2006] FCJ No. 1735 at paras. 49-50.
[58] Bradburn 1987, above n. 46, 161.
[59] Burt, Time 2008, above n. 5, 135.
[60] Wright 2008, above n. 43, 97; see also, C. D. B. Burt, 'Reconstruction of the duration of autobiographical events' (1992) 20 *Memory C Cognition* 124-32; C. D. B. Burt & S. Kemp, 'Retrospective duration estimation of public events' (1991) 19 *Memory C Cognition* 252-62.
[61] J. W. B. Douglas & J. T. Blomfield, 'The reliability of longitudinal surveys' (1956) 34 *The Milbank Memorial Fund Quarterly* 227-52 at 245; see also, Burt 1991, ibid., 253.
[62] M. K. Pyles, H. R. Stolz & J. W. Macfarlane, 'The accuracy of mothers' reports on birth and developmental data' (1935) 6 *Child Development* 165-76 in Burt 1991, ibid.
[63] S. A. Mednick & J. B. P. Shaffer, 'Mothers' retrospective reports in child-rearing research' (1963) 33 *American Journal of Orthopsychiatry* 457-61 in Burt 1991, ibid.

had taken police to respond to a distress call.[64] In a laboratory setting, when subjects who had watched a staged event were asked to guess how long it had lasted, their responses were off by a minimum of a factor of two.[65] When people kept diaries of their health for three months and then tried to recall the duration of their illnesses and ailments, their accuracy rate was 53 per cent.[66]

From this pattern of errors, psychologists propose that our reconstructions of event duration are based on 'how long events typically last', 'whether the event-type always has the same duration', and 'a host of other aspects', such as 'the complexity and interest value of the material that filled the duration'.[67] Several researchers have observed, for example, that 'people often use the number of events that they remember as a crude measure for the amount of time elapsed':[68] the more discrete components to an event, the longer it will seem. Since we 'appear to store knowledge about *typical* event duration in memory, rather than duration information for specific past events',[69] the duration of novel or atypical events is particularly hard to estimate, and our estimations are surprisingly suggestible: the way that a question is phrased can significantly alter our answer.[70] As one text concludes, 'In summary, estimating how long something took to happen is a very difficult task'.[71]

Decision makers cannot expect claimants to remember the duration of events, and should be cautious about expecting them to provide accurate

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[64] A. L. Schneider, W. R. Griffith, D. H. Sumi & J. M. Burcart, 'Portland forward records check of crime victims' (1978) US Department of Justice, Washington DC, in E. F. Loftus, J. W. Schooler, S. M. Boone & D. Kline, 'Time went by so slowly: Overestimation of event duration by males and females' (1987) 1 *Applied Cognitive Psychology* 3-13 at 12 (Loftus, Time).

[65] C. D. B. Burt & J. Popple, 'Effects of Implied Action Speed on Estimation of Event Duration' (1996) 10 *Applied Cognitive Psychology* 53-63.

[66] Cohen 1995, above n. 6, 282.

[67] A. C. I. Pedersen & D. B. Wright, 'Do differences in event descriptions cause differences in duration estimates?' (2002) 16 *Applied Cognitive Psychology* 769-83 at 773; V. Prohaksa, 'Reporting the dates of events: The role of prior knowledge' (1996) 4 *Memory* 325-36; Loftus, Time 1987, above n. 64, 3.

[68] Wright 2008, above n. 43, 98

[69] Burt, Time 2008, above n. 5, 137 (emphasis added).

[70] After witnessing a staged incident in a university lecture, e.g., students were asked '"How long did it take the person to [ ] through the lecture theatre", with either "*walk*", "*run*" or "*pass*" being used to complete the question'. The students' estimates 'paralleled the action speed implied by the question verb: the "*walk*" condition produced the largest duration estimates and the "*run*" condition the smallest': Burt 1996, above n. 65, 56; see also, Prohaksa 1996, above n. 67; Burt 1992, above n. 60.

[71] Wright 2008, above n. 43, 99.

duration estimates. The Federal Court of Canada was certainly right to overturn a decision in which the IRB found, for example, that a claimant was not credible because he could not remember how long it had taken him to dig his own grave at gunpoint. The Court suggested that the Member should have paid more attention to the claimant's explanation: 'he did not have a watch but more importantly he explained, in the particular situation he was in, his mind had not focused on the point'.[72]

2.1.4 Sequence

Some of the early research into our memory for dates had suggested that while such memory is clearly unreliable, we nonetheless seem to have a 'fairly good idea of the relative ordering' of events.[73] Yet a number of more recent studies that have specifically explored this issue call this conclusion into question. In one, for example, entries from the participants' diaries were transcribed onto cards and shuffled. When the subjects were asked to put them back into chronological order, they could do so correctly for an average of 36.5 per cent of the entries, regardless of how well they recalled the individual memories.[74] In another, subjects were given a camera and asked to document a day's events. At the end of the day, when they were asked to order the photographs chronologically, they got just over half of the sequence right (52.6 per cent). Two months later, their accuracy rate dropped to 36.2 per cent.[75]

From studies like these, researchers now conclude that in fact we 'often have difficulty recalling the order of the components of the autobiographical events',[76] that we are 'not very good'[77] at this type of task, that our attempts may be characterized by chronological misplacements',[78] and that there is 'ample evidence' that this type of

[72] *Alfonso v. Canada (Minister of Citizenship and Immigration)* [2007] FCJ No. 72 at para. 38.
[73] Brown 1985, above n. 7, 150; see also, Bruce 1989, above n. 47, 153.
[74] C. D. B. Burt, S. Kemp, J. M. Grady & M. Conway, 'Ordering autobiographical experiences' (2000) 8 *Memory* 323-32.
[75] C. D. B. Burt, S. Kemp & M. Conway, 'Ordering the components of autobiographical events' (2008) 127 *Acta Psychologica* 36-45 (Burt, Ordering). Other studies suggest that our ability to order events will likely be even worse when these events are unrelated; Friedman 2004, above n.14, 595, 597.
[76] Burt, Ordering 2008, ibid., 43.
[77] Burt, Time 2008, above n. 5, 130.
[78] Burt 2000, above n. 74, 330.

memory 'rapidly declines'.[79] As the researchers note, these error patterns are 'consistent with the prevalence of errors found when peoples' ability to date events is examined'[80] and is simply more evidence for the general finding, from study upon study, that '"memory for what" seemed to be largely independent of "memory for when"'.[81]

2.2 Common objects

To test the claimant's assertion that she was a citizen of Somalia, the Tribunal Officer asked her a simple question: 'What's on the back of the Somali five shilling note?' Her counsel intervened. 'Before my client answers', she said, 'Can you tell me, Officer, what's on the back of the Canadian five dollar bill?' He could not.

The Officer's question was less simple than it seemed because of our unexpectedly poor memory for common objects. The canonical study of common object memory, from 1979, demonstrated that its American subjects had only a very rough idea of what an American penny looked like. This study asked its subjects to draw a penny from scratch; to draw one when given a list of its features; to choose from among a list of genuine and fake features; to identify inaccuracies in pictures of pennies; and to pick a genuine penny out of a line-up. The results were what the researchers gently called 'remarkably poor':[82] attempts to draw a penny were for the most part 'grossly inaccurate'; less than half of the participants could identify the genuine penny; and many of the participants fell for a number of the fake features.[83] In case these results were peculiar to the penny, this study was replicated using different coins, with similar results.[84] And in case these results were peculiar to Americans, it was repeated world-wide: Canadians, Portuguese, Irish, Japanese, British – none of us has any clear idea what our coins look like.[85]

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[79] Burt, Ordering 2008, above n. 75, 43.

[80] Ibid.

[81] J. J. Skowronski, W. R. Walker & A. L. Betz, 'Ordering our world: An examination of time in auto-biographical memory' (2003) 11 *Memory* 247-60 at 257; for a review, see, Friedman 1993, above n. 5.

[82] R. S. Nickerson & M. J. Adams, 'Long-term memory for a common object' (1979) 11 *Cognitive Psychology* 287-307 at 288.

[83] Ibid., 301 (although no one was fooled by 'Made in Taiwan').

[84] D. C. Rubin & T. C. Kontis, 'A schema for common cents' (1983) 11 *Memory C Cognition* 335-41.

[85] B. M. Hughes, 'Misremembering the appearance of common objects: Further cross-cultural confirmation' (2002) 95 *Perceptual and Motor Skills*, 1255-8 at 1255; G. V. Jones, 'Misremembering a common object: When left is not right' (1990) 18 *Memory C Cognition* 174-82.

As other studies have shown, when it comes to everyday objects, we have trouble remembering everything from the location of the digits on the keypads of calculators[86] to the shape of the crescent moon.[87] In one study from the days before text-messaging, not one of the 151 participants could correctly remember how the letters were laid out on a telephone dial.[88] In another set of experiments, subjects could remember on average only 47 per cent of the main features, such as shape and colour, of 'some of the most important and common' British road signs, even though, as the researchers pointed out, when compared with coins, road signs are 'much larger, their designs are conveyed by different colours rather than merely by different contours, and attending to them is vital for personal safety'.[89] Almost half of the participants believed that the octagonal Stop sign was circular.[90] For such common objects, 'repeated exposure . . . proved to be remarkably ineffective in ensuring that their appearance can be accurately recalled'.[91]

From such studies a consensus has emerged that we have a particularly poor visual memory for common objects, and that this is due to an encoding rather than a retrieval failure – it is not that we store this information somewhere in our memory and find it difficult to locate it, but rather that we fail to register this type of information at all, for 'passive exposure . . . does not in itself lead to retention in memory'.[92] We could, of course, make the effort to learn what our money looks like, as demonstrated in a study entitled: 'Memory for common objects: Brief intentional study is sufficient to overcome poor recall of US coin features',[93] but we almost never do, because such knowledge 'would serve no useful function';[94] we 'do not need to know what is inscribed on

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[86] M. Rinck, 'Memory for everyday objects: Where are the digits on numerical keypads?' (1999) 13 *Applied Cognitive Psychology* 329-50.

[87] M. Martin & G. V. Jones, 'Memory for orientation in the natural environment' (1997) 11 *Applied Cognitive Psychology* 279-88.

[88] J. Morton, 'A singular lack of incidental learning' (1967) 215 *Nature* 203-4 in Rinck 1999, above n. 86.

[89] M. Martin & G. V. Jones, 'Generalizing everyday memory: Signs and handedness' (1998) 26 *Memory C Cognition* 193-200 at 193-4.

[90] Ibid., 198.

[91] Ibid., 195.

[92] Martin 1997, above n. 87, 280.

[93] W. R. Marmie & A. F. Healy, 'Memory for common objects: Brief intentional study is sufficient to overcome poor recall of US coin features' (2004) 18 *Applied Cognitive Psychology* 445-53.

[94] Martin 1997, above n. 87, 280; see also, Marmie 2004, ibid., 446.

coins to use them properly'.[95] Our memories for common objects 'are only as precise and accurate as they need to be' and we 'only remember enough of the visual properties of objects to be able to make the quite gross discriminations required in everyday life'.[96]

In a refugee hearing, however, claimants may be disbelieved if they perform poorly on this type of memory test. A claimant who cannot accurately describe his national identity document,[97] for example, may simply be demonstrating this well-known memory phenomenon.

2.3 Repeated events

When we experience repeated similar events, afterwards we may not only have trouble estimating their frequency; as a large body of research has shown conclusively, we typically lose the ability to remember individual instances clearly, if at all. Such 'initially distinguishable events can become confused or irretrievable'[98] because, simply put, it is often difficult 'to keep track of any one particular repeated event'.[99]

This is partly the result of what researchers refer to as 'the "updating" problem': in order to remember where you parked your car today, you need to update your memory of where you parked your car yesterday. As a result, 'When you are asked where you parked your car 2 weeks ago, any exact answer you give is likely to be wrong. Updating effectively erases the unique details of the past event from memory'.[100] In addition, rather than remembering each individual cold that we have suffered, or each visit to the doctor, our memories for these similar events typically merge and are replaced by 'generic memories for classes of similar events',[101] such as a typical cold or visit to the doctor.[102] Once our minds

[95] Rubin 1983, above n. 84, 340.
[96] A. D. Smith & G. Cohen, 'Memory for places: Routes, maps, and object locations' in Cohen 2008, above n. 33, 173-206 at 193.
[97] *Kabashi v. Canada (Minister of Citizenship and Immigration)* [1998] FCJ No. 509; *Ali v. Canada (Minister of Citizenship and Immigration)* [2004] FCJ No. 1350.
[98] Bradburn 1987, above n. 46, 158.
[99] Haber 2000, above n. 2, 1070.
[100] Ibid., 1071.
[101] J. B. Jobe, R. Tourangeau & A. F. Smith, 'Contributions of survey research to the understanding of memory' (1993) 7 *Applied Cognitive Psychology* 567-84 at 576.
[102] Williams 2008, above n. 33, 28; Belli 1998, above n. 47, 388.

have enough information to create this new 'blended memory',[103] the specific details of individual past instances are no longer needed; what we retain instead is their gist. Given 'the enormous problems . . . that would be incurred if everything were remembered',[104] this shift from specific event memory to generic script memory seems a good way to maximize retrieval efficiency.[105]

Everyday examples of this fairly intuitive observation abound.[106] Decision makers sometimes seem to believe, however, that if a repeated event is important or upsetting enough, it should be immune to this kind of shift, that each individual instance will be burned into our brains. What they often fail to understand is that the shift from specific event to generic script memory happens for significant and distressing events as well as for mundane ones.

If important repeated events were immune to this type of shift, we might be better at recalling our own medical history. In fact we are notoriously bad at it, in part because of the repetition effects described above. One study asked its subjects to recall any recurring serious medical events from the past year, where 'recurring' events were defined as those that had required three or more visits to medical professionals and 'serious' events were those 'involving a problem that would have a high probability of resulting in a major infection, debility, or death if not treated by a medical

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[103] Williams 2008, above n.33, 23.

[104] S. Kemp, C. D. B. Burt & L. Furneaux, 'A test of the peak-end rule with extended autobiographical events' (2008) 36 *Memory C Cognition* 132-8 at 133.

[105] Ulric Neisser, a pioneering researcher on autobiographical memory, coined the term 'repisodic memory' to refer to these constructed memories for repeated events. In a famous case study, Neisser analyzed the testimony of John Dean, former counsel to Richard Nixon, who had appeared before the Senate Watergate Investigating Committee and 'testified about conversations that later turned out to have been tape recorded'. Although Dean's description of individual conversations contained 'systematic distortion', Neisser nonetheless concluded that it was fundamentally accurate: it 'was accurate at a level that is neither "semantic" (since he was ostensibly describing particular episodes) nor "episodic" (since his accounts of the episodes were often wrong). The term "repisodic" is coined here to describe such memories: what seems to be a remembered episode actually represents a repeated serious of events, and thus reflects a genuinely existing state of affairs'. As Neisser noted in conclusion, Dean had 'recalled the theme of a whole series of conversations, and expressed it in different events'. U. Neisser, 'John Dean's memory: A case study' (1981) 9 *Cognition* 1-22 at 1; see also, Barclay 1986, above n. 14, 102. For a methodological criticism of Neisser's John Dean study, however, see, D. Edwards & J. Potter, 'The Chancellor's memory: Rhetoric and truth in discursive remembering' (1992) 6 *Applied Cognitive Psychology* 187-215.

[106] For a review, see, Jobe 1993, above n. 101.

professional'.[107] The subjects failed to recall more than half (54 per cent) of such visits.[108] Similarly, if distressing memories were immune to this type of shift, social workers and survey methodologists could stop trying to develop new ways to improve the specific event recall of domestic abuse victims. Researchers have long recognized that their subjects' inability to recall particular instances of abuse 'may compromise the validity' of their accounts of their life experiences, and so they have explored various surveying methods to try to help these women to 'gain better access' to these kinds of memories.[109] And as discussed further below, a recent study of refugees found that 'a common difficulty' reported by its subjects was 'related to the experience of repeated events that are similar', and suggested that some of their documented memory problems may have been caused by 'the mixing up of two or more events'.[110]

One of the clearest examples of the shift from specific event to generic script memory for repeated distressing events was documented in a study of four young people who had been sexually exploited over several months by a prostitution and pornography ring. When their abusers were eventually arrested, these children (ages eight to fifteen years) were interviewed at length by the police. They gave comprehensive statements in which they described in detail the abuse that they had suffered, statements whose overall truthfulness and accuracy were corroborated by the several hundred audiotapes and photographs seized by the police. And yet, when they were asked specifically about the particular events captured in the forensic evidence, they often had no clear memory. For many of these incidents, the children either admitted that they could not recall them or else they maintained that they had never happened, despite conclusive evidence to the contrary. Overall, their testimony

[107] Means 1991, above n. 17, 307.

[108] Ibid.; see also, Cohen 1995, above n. 6; J. B. Jobe, A. W. White, C. L. Kelley, D. J. Mingay, M. J. Sanchez & E. F. Loftus, 'Recall strategies and memory for health-care visits' (1990) 68 *Milbank Quarterly* 171-89.

[109] M. Yoshihama, B. Gillespie, A. C. Hammock, R. F. Belli & R. M. Tolman, 'Does the life history calendar method facilitate the recall of intimate partner violence? Comparison of two methods of data collection' (2005) 29 *Social Work Research* 151-63; for a review, see also, R. F. Belli, W. L. Shay & F. P. Stafford, 'Event history calendars and question list surveys: A direct comparison of interviewing methods' (2001) 65 *Public Opinion Quarterly* 45-74 at 66.

[110] J. Herlihy, P. Scragg & S. Turner, 'Discrepancies in autobiographical memories – implications for the assessment of asylum seekers: repeated interviews study' (2002) 324 *British Medical Journal* 324-7 at 326; see also, Herlihy 2009, above n. 3, 183.

contained 'high levels of omission errors' – they had no memory at all for more than a third (39 per cent) of the serious acts of abuse 'which are known to have occurred'.[111] The researchers concluded that the children's memories for these repeated events had simply fused.[112]

In short, there is no reason why decision makers should not expect to see evidence of the standard 'transition from episodic to semantic memory'[113] for claimants' memories of important or distressing events.

2.4 Peripheral information

The fact that an event is memorable does not mean that we will remember its every detail. When the IRB finds, for example, that a claimant ought to remember 'how the people at the military prosecutor's office had been dressed' on an occasion several years earlier,[114] or the precise shape, size and colour of the bag in which she had packed her belongings,[115] or the frequency of the radio station that he had been listening to when he learned that he was being sought by the authorities,[116] this simply does not accord with what we know about how people remember.

As ample research has made clear, 'It is not justified to assume that *all* details are well retained because they occurred within an emotional scenario'.[117] Instead, we will remember best those aspects of an event to which we were paying the closest attention at the time, and we will be unlikely to remember clearly, if at all, others that escaped our focus. 'It is possible for events to occur directly in front of you', for example, 'well within your range of seeing and hearing, and yet make no impact on your memory if you were attending to something else at the time'.[118]

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[111] S. Bidrose & G. S. Goodman, 'Testimony and evidence: A scientific case study of memory for child sexual abuse' (2000) 14 *Applied Cognitive Psychology* 197-213 at 209.
[112] Ibid.
[113] Means 1991, above n. 17, 298.
[114] *J.U. v. Canada (Minister of Citizenship and Immigration)* [2005] FCJ No. 1079 at para. 8.
[115] *Hagi-Mayow v. Canada (Minister of Citizenship and Immigration)* [1994] FCJ No. 292 at para. 15.
[116] *Michael v. Canada (Minister of Citizenship and Immigration)* [1997] FCJ No. 933.
[117] Christianson 1993, above n. 33, 367 (emphasis in original).
[118] Haber 2000, above n. 2, 1061.

More surprising, perhaps, is the observation that the very act of focusing on certain aspects of an event 'comes at a cost'; it appears to impair our ability to remember other information to which we were not paying as close attention.[119] Researchers have suggested that 'attentional narrowing'[120] or 'tunnel memory'[121] may help to explain the findings from a number of eyewitness studies in which witnesses to actual or simulated crimes, who had focused intently on the central features of the event unfolding in front of them, had significantly impaired memory for other surrounding details.[122] These studies 'tend to converge to a similar pattern of data: witnesses' descriptions seem to be accurate and persistent over time with respect to certain central, critical details of emotional or violent events, but are less accurate for peripheral, irrelevant details, or surrounding/circumstantial information'.[123]

Which information is 'central' and which is 'peripheral' is necessarily a subjective determination, one to be made from the perspective of the person whose memory is at issue:[124] 'central details' are those 'to which the subject attributes the most importance'.[125] One striking fact to emerge from the research into eyewitness memory is that there is considerable individual variety in the types of information that captures our attention. When different people watch the same crime scene, some remember the make of the car and not the colour, some the colour and not the make.[126] One witness to a shooting told the police that she had been riveted by the victim's body. She could describe precisely and accurately his wounds, his location on the street and the physical position of his

[119] S.-A. Christianson & E. F. Loftus, 'Memory for traumatic events' (1987) 1 *Applied Cognitive Psych- ology* 225-39 at 237; M. A. Safer, S.-A. Christianson, M. W. Autry & K. Österlund, 'Tunnel memory for traumatic events' (1998) 12 *Applied Cognitive Psychology* 99-117; J. M. Brown, 'Eyewitness memory for arousing events: Putting things into context' (2003) 17 *Applied Cognitive Psychology* 93-106; S.-A. Christianson, E. F. Loftus, H. Hoffman & G. R. Loftus, 'Eye fixations and memory for emotional events' (1991) 17 *Journal of Experimental Psychology: Learning, Memory and Cognition* 693-701.

[120] Christianson 1991, ibid., 693.

[121] Safer 1998, above n. 119; T. H. Kramer, R. Buckhout & P. Eugenio, 'Weapon focus, arousal and eyewitness memory: Attention must be paid' (1990) 14 *Law C Human Behavior* 167-84 at 168.

[122] See, e.g., Christianson 1993, above n. 33; Christianson 1987, above n. 119.

[123] Christianson 1993, above n. 33, 376; but see, B. S. Cooper, M. A. Kennedy, H. F. Hervé, J. C. Yuille, 'Weapon focus in sexual assault memories of prostitutes' (2002) 25 *International Journal of Law and Psychiatry* 181-91.

[124] Herlihy 2002, above n. 110, 325.

[125] Kramer 1990, above n. 121, 168.

[126] A. B. Villegas, M. J. Sharps & S. Chisholm, 'Eyewitness memory for vehicles' (Fall 2005) *The Forensic Examiner* 24-8 at 28.

body, but when she was asked to describe what he was wearing, she remembered him in a T-shirt and red and black plaid jacket. He was wearing a dark blue sweater and a blue jean jacket. Despite being literally wrapped around the focus of her attention, the victim's clothes were peripheral information ('this witness reported that the body was her "main focus of attention" but apparently this did not include his clothing').[127]

One thing that will typically capture our attention, however, is a weapon, and this has a predictable effect on our peripheral memory: in study upon study, subjects exposed to a weapon would focus on it at the expense of everything else around it, including the person holding it. The first study to document this 'weapon effect' or 'weapon focus' showed two groups of people short videos of a convenience store transaction, identical except that in the first video the customer hands the clerk a cheque and the clerk gives him back his change, whereas in the second, the customer pulls a gun, and the clerk hands him the money from the till. The subjects who saw the gun version were less than half as likely to be able to pick the customer out of a line-up.[128] This effect has been replicated in a number of other laboratory studies, as well as in live-simulation experiments.[129]

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[127] Yuille 1986, above n. 33, 296.

[128] E. F. Loftus, G. R. Loftus & J. Messo, 'Some facts about "Weapon Focus"' (1987) 11 *Law C Human Behavior* 55-62 (Loftus, Weapon).

[129] A. Maass & G. Köhnken, 'Eyewitness identification: Simulating the "weapon effect"' (1989) 13 *Law C Human Behavior* 397-408; Kramer 1990, above n. 121; W. Oue, N. Onuma, Y. Uchino & Y. Hakoda, 'The effect of sharpness of a knife on weapon focus' (2002) 21 *Japanese Journal of Psychonomic Science* 45-6; for review, see, Haber 2000, above n. 2. The fact that our attention is focused on a weapon, however, does not mean that we will necessarily be able to remember that weapon clearly. Focused attention is a necessary but not sufficient condition for detail memory. While some 'weapon focus' studies have noted that their subjects were generally able to describe the weapon well (Kramer 1990, above n.121), a number of other studies have found that we are often quite poor at recognizing and identifying different types of guns, even in focused laboratory experiments (for a review, see, M. J. Sharps, A. B. Hess, H. Casner, B. Ranes & J. Jones, 'Eyewitness memory in context: Toward a systematic understanding of eyewitness evidence' (Fall 2007) *The Forensic Examiner* 20-7 at 22). The fact that ninety-two of 103 respondents in another study thought that they had seen a gun in the hands of a man holding an electric screwdriver highlights a separate and related problem: 'an impressive body of psychological research' on eyewitness memory, 'consisting of more than 2000 papers [as of 2005]', has demonstrated beyond question that 'gross inaccuracies are not uncommon and that memory is highly suggestible'. P.A. Granhag, L. A. Strömwall & M. Hartwig, 'Eyewitness testimony: Tracing the beliefs of Swedish legal professionals' (2005) 23 *Behavioral Sciences and the Law* 709-27 (Granhag, Eyewitness) at 709; Sharps 2007, above, 25; Williams 2008, above n. 33, 76; see also, D. B. Wright & E. F. Loftus, 'How misinformation alters memories' (1998) 71 *Journal of Experimental Child Psychology* 155-64.

Weapons focus may work both forwards and backwards; not only do we stop registering other aspects of a scene once a weapon comes into view, we may also have trouble remembering information that was presented before the weapon made its appearance. Such 'retrograde impairments'[130] were demonstrated in a modified version of the video study above, where two groups of subjects viewed identical videos, except that one of the videos ended without incident and the other ended in a shooting. The group that saw the violent version had trouble remembering peripheral details from the first half of the film, before the shooting had occurred. The differences in recall were 'dramatic': only 4.3 per cent of the subjects who had watched the violent version correctly remembered a particular detail from the first half of the film, compared with 27.9 per cent of the non-violent control group. 'A promising explanation for these memory deficits', the researchers concluded, 'is that mental shock disrupts the lingering processing necessary for full storage of information in memory'.[131]

Some psychologists have suggested that when a weapon is present 'almost everything else that's happening goes unnoticed and therefore unremembered' and that 'it should always be assumed that violence in any form narrows attention, and that which is outside the resultant narrowed attention is encoded less completely, if at all'.[132] This may be going too far, however, as other studies have failed to find this effect,[133] which suggests that it may not occur under all circumstances, or

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[130] B. H. Bornstein, L. M. Liebel & N. C. Scarberry, 'Repeated testing in eyewitness memory: A means to improve recall of a negative emotional event' (1998) 12 *Applied Cognitive Psychology* 119-31; E. F. Loftus & T. E. Burns, 'Mental shock can produce retrograde amnesia' (1982) 10 *Memory C Cognition* 318-23.

[131] Loftus 1982, above n. 130, 321. These findings have not been consistently replicated, however: other studies that have exposed their subjects to shocking images among a sequence of neutral ones have found anti-retrograde but not retrograde impairments: see, T. H. Kramer, R. Buckhout, P. Fox, E. Widman & B. Tusche, 'Effects of stress on recall' (1991) 5 *Applied Cognitive Psychology* 483-88; S.-A. Christianson & L.-G. Nilsson, 'Functional amnesia as induced by a psychological trauma' (1984) 12 *Memory C Cognition* 142-5.

[132] Haber 2000, above n. 2, 1062.

[133] When researchers have analyzed case reports of live crimes, e.g., or have interviewed assault victims, they have sometimes found that the witnesses' descriptions of the perpetrator were more complete when a weapon was involved. It is difficult to generalize from these types of studies, however, because of their small sample sizes, and because they are typically unable to control for many key 'confounding variables': the researchers cannot tell from the case reports, e.g., how far

that it may occur but be outweighed by other effects. There nonetheless remains a 'broad consensus' that weapon focus generally impairs eyewitness memory for peripheral details[134] and that 'high degrees of stress [at the time of an event] tend to reduce the amount of recall'.[135]

In light of the above, decision makers must be extremely cautious in concluding that any particular aspect of an event, especially a violent one, is by its nature so significant that a claimant could hardly fail to remember it.

2.5 Names

Many studies have shown experimentally what most of us know instinctively: that proper names are often very hard to remember. In clinical settings it becomes clear, for example, that it is much harder for subjects to remember a person's name than to remember his occupation or hobbies.[136] There is, in fact, a 'vast difference between memory for names and memory for occupations'.[137] Many researchers have concluded that gaps in memory are 'much more frequent for proper names than for other kinds of words',[138] and that our brains may in fact use separate and independent memory processes to store proper names, distinct from the ones that we use to remember 'other types of

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away the various witnesses were, how good their visibility was, how long the crime lasted, or even whether or not the witnesses knew the offender beforehand. Cooper 2002, above n. 123, 189; G. F. Wagstaff, J. MacVeigh, R. Boston, L. Scott, J. Brunas-Wagstaff & J. Cole, 'Can laboratory findings on eyewitness testimony be generalized to the real world? An archival analysis of the influence of violence, weapon presence, and age on eyewitness accuracy' (2003) 137 *The Journal of Psychology* 17-28 at 25, 26.

[134] Villegas 2005, above n. 126, 24; see also, Granhag, Eyewitness, 2005, above n. 129, 718.

[135] Kramer 1991, above n. 131, 487.

[136] G. Cohen and D. Faulker, 'Memory for proper names: Age differences in retrieval' (1986) 4 *British Journal of Developmental Psychology* 187-97 (Abstract); D. M. Burke, D. G. MacKay, J. S. Worthley & E. Wade, 'On the tip of the tongue: What causes word finding failures in young and older adults?' (1991) 30 *Journal of Memory and Language* 542-79

[137] J. R. Hanley & G. Cohen, 'Memory for people: Faces, names, and voices' in Cohen 2008, above n. 33, 107-40 at 127.

[138] G. Cohen, 'Why is it difficult to put names to faces?' (1990) 81 *British Journal of Psychology* 287-97 at 287; Burke 1991, above n. 136. Other researchers have raised cautions about the methodologies of these studies, however; see, Hanley 2008, ibid., 131.

information that we know about people'.[139] Whatever the neural mechanisms at work, 'you may often be able to remember many biographical details about the person, but still be unable to put a name to his or her face'.[140]

Although we typically remember names more easily if we have used them frequently or recently,[141] we nonetheless often forget the names of people who are 'very familiar', even those whom we have known for many years.[142] One study looking at mental blocks found, in fact, that the majority of its subjects' memory gaps were for the names of friends and acquaintances.[143] As a result, researchers suggest that 'proper names are not just difficult to learn but difficult to retrieve, even when well learned'.[144]

One theory that has been proposed to explain this finding is that proper names are 'difficult to remember because they have little, if any meaning'.[145] Words that carry meaning are connected in our brains with other pockets of related information, and are often triggered when we bring that related information to mind. Since proper names are meaningless, however, or else carry meanings (such as Hunter or Taylor) that we 'habitually ignore' because they are 'irrelevant, nonsensical or conflict with actual person identity information',[146] they are 'lacking in the semantic associations that allow other kinds of person identity information to be related to stored knowledge'.[147]

Without question there is 'a wide range of individual differences in ability' to remember names.[148] Yet 'many people are not at all good' at

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[139] Hanley 2008, ibid., 126.

[140] Cohen 1990, above n. 138, 287.

[141] Hanley 2008, above n. 137, 132.

[142] Burke 1991, above n. 136, 556, 572.

[143] Cohen 1986, above n. 136; Hanley 2008, above n. 137, 131.

[144] Burke 1991, above n. 136, 562.

[145] Cohen 1990, above n. 138, 289; Burke 1991, above n. 136, 570.

[146] Cohen, ibid., 295.

[147] Ibid., 296.

[148] Hanley 2008, above n. 137, 136.

it,[149] and enough are so bad that it can be hard for medical professionals to tell, for example, whether a patient's poor memory for names is simply the result of everyday bad memory, or whether it is a sign of a more serious memory impairment. In other words, when it comes to memory for names, enough of us are impaired enough that 'the line between normal and pathological performance is blurred'.[150]

Although we often forget the names even of our friends and acquaintances, and our ability to remember proper names in general is often so poor that it borders on a clinical impairment, the Board has disbelieved at least two claimants because they could not remember the name of the ship on which they fled their country.[151] Another was disbelieved because he could not name the police officer from whom he had requested evidence,[152] another because he could not recall the names of the other prisoners with whom he had been incarcerated years earlier.[153] The research suggests that such findings are simply unreasonable.

2.6 Verbatim memory

'When people remember conversations, what do they remember?'[154]

Researchers distinguish 'gist memory' ('memory for content')[155] from 'verbatim memory' ('memory for [verbal] structure').[156] They posit that these two different types of memory are 'represented and stored independently' in the brain and are 'dissociated from each other',[157]

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[149] Ibid.

[150] Ibid.

[151] *Frejuste v. Canada (Minister of Citizenship and Immigration))* [2009] FCJ No. 831; *Goloman v. Canada (Minister of Citizenship and Immigration)* [2001] FCJ No. 1155.

[152] *Abbace v. Canada (Minister of Citizenship and Immigration)* [2000] FCJ No. 377.

[153] *Amaya v. Canada (Minister of Citizenship and Immigration)* [2005] FCJ No. 1685.

[154] L. Campos & M. Alonso-Quecuty, 'Remembering a criminal conversation: Beyond eyewitness testimony' (2006) 14 *Memory* 27-36 at 28.

[155] M. E. Lamb, Y. Orbach, K. J. Sternberg, I. Hershkowitz & D. Horowitz, 'Accuracy of investigators' verbatim notes of their forensic interviews with alleged child abuse victims' (2000) 24 *Law C Human Behavior* 699-708.

[156] Ibid.

[157] C. J. Brainerd & V. F. Reyna, 'Fuzzy-trace theory and memory development' (2004) 24 *Developmental Review* 396-439 at 402; for a review, see, Lamb 2000, above n. 155.

meaning that it is possible to remember the one without the other.

Many studies have shown that verbatim and gist memories have 'differential survival rates'.[158] After even a short passage of time, our ability to remember exact wording is often 'surprisingly poor'[159] or 'extremely poor',[160] even where the precise wording is important: verbatim memory 'is very fragile and may be forgotten within a few minutes or even seconds'.[161] In one laboratory study, verbatim memory disappeared 'after only 40 syllables of intervening material (equal to 12.5 seconds)'.[162] As a result, when we remember conversations, typically only gist memory, only 'the semantic properties of discourse are encoded into long-term memory'.[163] This is true even for novel or unexpected exchanges: the fact that a conversation is surprising will likely improve our ability to remember its gist, but will not help our verbatim recall, which remains as weak as ever.[164]

The short answer to the question posed above is that when we remember conversations, we 'tend to remember the gist, showing little verbatim memory of what was said'.[165] Decision makers cannot expect claimants to be able to recall the precise wording of verbal exchanges.

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158 Brainerd 2004, ibid., 403-4.

159 K. Pezdek & M. Prull, 'Fallacies in memory for conversations: Reflections on Clarence Thomas, Anita Hill, and the like' (1993) 7 *Applied Cognitive Psychology* 299-310 at 299.

160 Campos 2006, above n.154, 33; see also, J. B. Miller, P. de Winstanley & P. Carey, 'Memory for conversation' (1996) 4 *Memory* 615-31.

161 G. A. Radvansky, 'Situation models in memory: Texts and stories' in Cohen 2008, above n. 33, 228-47 at 229.

162 R. G. Crowder, *Principles of learning and memory* (Hillsdale, New Jersey: Lawrence Erlbaum, 1976) in Pezdek 1993, above n. 159, 300.

163 Pezdek, ibid.

164 Ibid., 308.

165 Campos 2006, above n. 154, 35; see also, Miller 1996, above n. 160. In addition, as Neisser's John Dean study demonstrated, in remembering a series of conversations, we may remember the gist of the whole rather than the gist of any particular instance: 'He is not remembering the 'gist' of a single episode by itself, but the common characteristics of a whole series of events'. Neisser 1981, above n. 105, at 20.

3. Consistency

It is one thing for a claimant to say 'I can't remember'; it is quite another for her to tell a story that keeps changing. Even when decision makers can accept gaps in a claimant's memory, most, nonetheless, expect a high degree of consistency in her testimony. Before appearing at her IRB hearing, the claimant must complete a questionnaire that asks her to provide, along with other biographical information, a written statement setting out 'all of the significant events and reasons that led you to seek protection in Canada'; her credibility will then be assessed based on the consistency of her oral testimony with this written evidence.[166] Refugee status decision makers are not alone in believing that a consistent story is a true story, and the reverse. Police officers, prosecutors and judges, as well as lay people, tend overwhelmingly to agree.[167]

Yet when it comes to assessing credibility, police officers, prosecutors and judges, as well as lay people, have 'hit rates just above the level of chance'.[168] And one of the commonly proposed explanations for this low success rate is that professional lie detectors and lay people alike tend to rely on the 'consistency heuristic' – the notion that 'consistency implies truth, whereas inconsistency implies deception'.[169] In fact, it has now been

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[166] In the IRB's training materials for new Refugee Protection Division Members, under the heading 'Tools for Testing Presumption of Credible Testimony', the first item listed is 'Inconsistencies within the testimony'. IRB, 'Reasons for Decision: RPD New Member Training: Training Materials' *Learning and Professional Development*, June 2007, 13.

[167] See, L. A. Strömwall, P. A. Granhag, A.-C. Jonsson, 'Deception among pairs: "Let's say we had lunch and hope they swallow it!"' (2003) 9 *Psychology, Crime C Law* 109-24 at 110-11; N. Brewer & A. Burke, 'Effects of testimonial inconsistencies and eyewitness confidence on mock-juror judgments' (2002) 46 *Law C Human Behavior* 353-64; N. Brewer & R. M. Hupfeld, 'Effects of testimonial inconsistencies and witness group identity on mock-juror judgments', (2004) 34 *Journal of Applied Social Psychology* 493-513. One study found that Swedish Migration Board members shared this view, and the researchers noted that 'we have no reason to expect that the beliefs of Swedish MB personnel differ from those of other Western MB personnel': P. A. Granhag, L. A. Strömwall & M. Hartwig, 'Granting asylum or not? Migration Board personnel's beliefs about deception' (2005) 31 *Journal of Ethnic and Migration Studies* 29-50 (Granhag, Migration) at 47.

[168] For a review, see, M. Hartwig, P. A. Granhag, L. A. Strömwall, 'Guilty and innocent suspects' strategies during police interrogations' (2007) 13 *Psychology, Crime C Law* 213-27 at 213; see also, P. A. Granhag & L. A. Strömwall, 'Effects of preconceptions on deception detection and new answers to why lie-catchers often fail' (2000) 6 *Psychology, Crime C Law* 197-218.

[169] Strömwall 2003, above n. 167, 121; P. A. Granhag & L. A. Strömwall, 'Repeated interrogations – Stretching the deception detection paradigm' (1999) 7 *Expert Evidence* 163-74; Granhag, Migration 2005, above n. 167.

clearly demonstrated in study upon study that truthful and deceptive accounts are 'equally consistent over time',[170] most likely because 'liars try to remember what they have said in previous interrogations, while truth-tellers try to remember what they have actually experienced'.[171] Contrary to popular belief, these tasks are equally challenging.[172]

Two sets of findings help to explain why it is often so difficult for truthful people to recount the same event in a consistent fashion. First, as set out above, all memories are reconstructions, and certain kinds of information are not easily reconstructed. When we try to date events, or to describe their duration or frequency, we estimate. When we report conversations, rather than providing faithful 'word-for-word reproductions',[173] we narrate them in our own words.[174] If we are then asked to date or retell the same experience again, weeks or months or years later, we will estimate or illustrate anew, and we may come up with a different figure or use different words – a fact that routinely causes claimants to be judged not credible. To the claimant who received three threatening phone calls (or was it four?);[175] or who was arrested at the end of June (or was it early July?);[176] or whose attackers in conversation stated a fact outright (or did they clearly imply it?);[177] Members of the Board respond with the classic

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[170] P. A. Granhag & L. A. Strömwall, 'Repeated interrogations: Verbal and non-verbal cues to deception' (2002) 16 *Applied Cognitive Psychology* 243-57 at 255; P.A. Granhag, L. A. Strömwall & A.-C. Jonsson, 'Partners in crime: How liars in collusion betray themselves' (2003) 33 *Journal of Applied Social Psychology* 848-68; Granhag 1999, ibid.

[171] Granhag 2002, ibid., 245; Hartwig 2007, above n. 168.

[172] The noted exception is when people testify in pairs: pairs of liars tend to be *more* consistent between them, not less, suggesting that 'liars in collusion know that planning is crucial'. Granhag 2003, above n. 170, 850; W. A. Wagenaar & A. Dalderop, 'Remembering the zoo: A comparison of true and false stories told by pairs of witnesses' (1994), unpublished manuscript, Department of Experimental Psychology, Leiden University, The Netherlands, in Granhag 2003, above n. 170; Strömwall 2003, above n. 167.

[173] Campos 2006, above n. 154, 33

[174] A leading researcher recently noted in a study entitled 'Retelling is not the same as recalling' that when we recount our experiences in a conversational style we 'retell' them, rather than attempting to recall them as precisely as we would in a more structured memory test. Outside of the laboratory, we 'tend to focus on the kernel of meaning rather than on specific details' and for this reason, across a wide variety of everyday contexts, truthful and broadly accurate retellings are likely to be significantly inaccurate from a clinical perspective. E. J. Marsh, 'Retelling is not the same as recalling: Implications for memory' (2007) 16 *Current Directions in Psychological Science* 16-20 at 16, 17.

[175] *Quevedo v. Canada (Minister of Citizenship and Immigration)* [2006] FCJ No. 1585 at para. 24.

[176] *Ojo*, above n. 27.

[177] *Taboada v. Canada (Minister of Citizenship and Immigration)* [2008] FCJ No. 1395.

'Were you lying then, or are you lying now?' This is a typical and misguidedly 'mechanical'[178] application of the consistency heuristic, one that likely helps to explain why in one study 'lie-catchers given access to consecutive statements from one suspect did not perform better than lie-catchers given access to one statement only'.[179]

Second, as set out below, over time a person's memory, and hence her story, may change and may change significantly, owing to a number of well-documented memory effects. Some memories fade or become distorted while others get stronger. Loss and gain of information is 'typical of how memory works'.[180] As a result, 'truth tellers, who repeatedly try to retrieve a previously experienced event, can be expected to gain, lose, and change information over time'.[181] This has led Loftus, perhaps 'the main authority in eyewitness memory research',[182] to suggest in all seriousness that the oath in court should be changed to: 'Do you swear to tell the truth, the whole truth, or whatever it is that you think you remember?'[183]

The following section will address these effects for memory in general, and will then turn specifically to the types of shocking and upsetting memories that claimants are often describing, for it is a common misperception 'that highly stressful and emotional experiences leave

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[178] Strömwall 2003, above n. 167, 121.

[179] Granhag 1999, above n. 169, 163. A further caution against relying on consistency as a measure of credibility is noted in the research: to a large degree, consistency is in the eye of the beholder. Several studies looking at consistency have observed that there was often 'substantial disagreement' among the researchers and their assistants as to whether or not the subjects' statements were consistent. For one set of statements, e.g., half of the seventy-eight assistants found them to be consistent and half found them to be inconsistent. Granhag 2000, above n. 168, 211, 215; see also, S. Porter, J. C. Yuille & D. R. Lehman, 'The nature of real, implanted and fabricated memories for emotional childhood events: Implications for the recovered memory debate' (1999) 23 *Law C Human Behavior* 517-37 in Granhag 1999, above n. 169. This level of subjectivity further undermines the value of consistency as a reliable tool for assessing credibility.

[180] J. W. Turtle & J. C. Yuille, 'Lost but not forgotten details: Repeated eyewitness recall leads to reminiscence but not hypermnesia' (1994) 79 *Journal of Applied Psychology* 260-71 at 269.

[181] Granhag 2003, above n. 170; S. J. Anderson, G. Cohen & S. Taylor, 'Rewriting the Past: Some factors affecting the variability of personal memories' (2000) 14 *Applied Cognitive Psychology* 435-54 at 450.

[182] S.-A. Christianson, 'Emotional stress and eyewitness memory: A critical review' (1992) 112 *Psychological Bulletin* 284-309 at 285.

[183] R. Fordham, 'What do you remember?', *BBC News*, June 6 2008.

indelible memories'.[184] In fact, as discussed below, the standard testing conditions at refugee status determinations help to ensure that claimants' memories are particularly vulnerable to these kinds of shifts.

3.1 Losses

Not surprisingly, memory research confirms that we can expect to experience a more or less 'linear loss' of our autobiographical memory.[185] Over time, our memories usually 'lose specificity' and 'become more generalized', our 'older memories tend to be less vivid and less accessible', and although our confidence in our memories often remains misguidedly high, in fact their 'accuracy declines'.[186] The more time passes, the more of our past we forget, even the 'critical details'.[187] In one famous study, a researcher kept detailed records of his daily life, making a special note of the 'critical' facts that he felt he would 'certainly' remember. When he tested his memory one year later, he had no memory at all for 20 per cent of them; after five years, the figure had climbed to 60 per cent.[188]

One factor that has been shown to increase the rate at which we lose information is the mental rehearsal of other related information. As set out in the next section, the more often we call a memory to mind, and the more we try to remember about it, the more of its detail will come back to us. As a rule, 'rehearsed information is better remembered than non-rehearsed information'.[189] However, as with focused attention, focused memory comes at a cost: we are more likely to forget other aspects of the remembered event upon which we have not been concentrating. Various cognitive theories have been proposed to account for this effect, known as 'retrieval competition' or 'retrieval-induced forgetting'.[190] Whatever the cause, this involuntary process appears to be

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[184] Williams 2008, above n. 33, 78

[185] Belli 2001, above n. 109, 46.

[186] Barclay 1986, above n. 14, 99, 101; Williams 2008, above n. 33, 81.

[187] Bradburn 1987, above n. 46, 158.

[188] Wagenaar 1986, above n. 13; see also, Bradburn 1987, ibid.; Linton 1975, above n. 13; C. D. B. Burt, S. Kemp & M. Conway, 'What happens if you retest autobiographical memory 10 years on?' (2001) 29 *Memory C Cognition* 127-36.

[189] Marsh 2007, above n. 174, 18.

[190] M. C. Anderson, 'Rethinking interference theory: Executive control and the mechanisms of

'a very robust and general phenomenon',[191] one that has been demonstrated not only in the laboratory in a variety of word experiments,[192] but also in studies of eyewitness and autobiographical memory.

In one famous eyewitness experiment, subjects were shown slides of a crime scene, and afterwards half were asked to try hard to remember certain elements. When all of the subjects were then asked to recall as much as they possibly could about what they had witnessed, those who had been coached were much better able to remember the specific aspects to which their memories had been directed, but they could remember much less about the scene in general.[193] The same effects have predominantly, although not always, been replicated in other eyewitness studies.[194] Similar findings have also been reported in the context of autobiographical memories,[195] leading some researchers to conclude that 'retrieving some autobiographical memories may

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forgetting' (2003) 49 *Journal of Memory and Language* 415-45 at 424-5; K.-H. Bäuml, M. Zellner & R. Vilimek, 'When remembering causes forgetting: Retrieval-induced forgetting as recovery failure' (2005) 31 *Journal of Experimental Psychology: Learning, Memory and Cognition* 1221-34; M. D. MacLeod & C. N. Macrae, 'Gone but not forgotten: The transient nature of retrieval-induced forgetting' (2001) 12 *Psychological Science* 148-52; M. MacLeod, 'Retrieval-induced forgetting in eyewitness memory: Forgetting as a consequence of remembering' (2002) 16 *Applied Cognitive Psychology* 135-49; J. Saunders & M. D. MacLeod, 'New evidence on the suggestibility of memory: The role of retrieval-induced forgetting in misinformation effects' (2002) 8 *Journal of Experimental Psychology: Applied* 127-42; M. D. MacLeod, J. Saunders & L. Chalmers, 'Retrieval-induced forgetting: The unintended consequences of unintended forgetting' in G. M. Davies & G. B. Wright (eds.), *Current Issues in Applied Memory Research* (New York: 2010), 50-71.

[191] Bäuml 2005, ibid., 1221.

[192] See, e.g., M. C. Anderson, R.A. Bjork & E. L. Bjork, 'Remembering can cause forgetting: Retrieval dynamics in long-term memory' (1994) 20 *Journal of Experimental Psychology: Learning, Memory, and Cognition* 1063-87; B. Spitzer & K.-H. Bäuml, 'Retrieval-induced forgetting in item recognition: Evidence for a reduction in general memory strength' (2007) 33 *Journal of Experimental Psychology: Learning, Memory, and Cognition* 863-75.

[193] J. S. Shaw III, R. A. Bjork & A. Handal, 'Retrieval-induced forgetting in an eyewitness-memory paradigm' (1995) 2 *Psychonomic Bulletin C Review* 249-53.

[194] For a review, see, MacLeod 2002, above n. 190; M. D. MacLeod & J. Saunders, 'The role of inhibitory control in the production of misinformation effects' (2005) 31 *Journal of Experimental Psychology: Learning, Memory and Cognition* 964-79; but see, B. J. A. Hauer, I. Wessel, H. Merckelbach, A. Roefs & T. Dalgleish, 'Effects of repeated retrieval of central and peripheral details in complex emotional slides' (2007) 15 *Memory* 435-49.

[195] I. Wessel & B. J. A. Hauer, 'Retrieval-induced forgetting of autobiographical memory details' (2006) 20 *Cognition C Emotion* 430-47; A. J. Barnier, L. Hung & M. A. Conway, 'Retrieval-induced forgetting of emotional and unemotional autobiographical memories' (2004) 18 *Cognition and Emotion* 457-77.

unintentionally, and almost inevitably, inhibit other [related] memories'.[196] When subjects are asked, for example, to recall sets of thematically related memories, and are then made to practice only some of these memories, their recall for the unpracticed memories becomes significantly impaired.[197]

The forensic implications of these studies are not lost on the researchers. They note that the methods used by police and lawyers in questioning witnesses 'give rise to exactly those conditions which, in the laboratory, have been shown to produce robust retrieval-induced forgetting effects'.[198] Some speculate, in fact, that 'the frequency and intensity of police interrogations' may in fact cause effects that are 'larger than in an experimental laboratory'.[199] At the very least, since it has been shown under laboratory conditions that 'repeated interrogation of a witness can modify the witness's memory – enhancing the recall of certain details while inducing the forgetting of other details',[200] it would 'seem somewhat ironic, therefore, that the very procedure used for eliciting a witness' account of an event may actually give rise to those conditions that are most likely to promote memory distortions'.[201]

Decision makers will often assess a claimant's credibility in light of his ability to provide spontaneous detail. A well-trained Member will go beyond the four corners of a claimant's initial written statement to see if he can expand on his story. The claimant, however, is caught in a bind. If he has counsel – or any clue about how the refugee claim process works – he will have spent many hours rehearsing his statement, in order to

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196 Barnier 2004, ibid., 469.

197 Ibid.; see also, Mcleod 2005, above n. 194. Some researchers have suggested a link between these findings and other research that has shown a correlation between 'intrusive memory' (flashbacks) and 'over-general memory' (memory that is vague and lacking in detail). People who remember trauma vividly and repeatedly often have poor memories generally, and some researchers suggest that this effect could be caused by an 'RIF [Retrieval-Induced Forgetting] -like phenomenon': when our minds are caught in the loop of involuntarily rehearsing traumatic memories, our recall for other memories may become impaired. Wessel 2006, above n. 195, 432; A. R. Moradi, J. Herlihy, G. Yasseri, M. Shahraray, S. Turner & T. Dalgleish, 'Specificity of episodic and semantic aspects of autobiographical memory in relation to symptoms of posttraumatic stress disorder (PTSD)' (2008) 127 *Acta Psychologica* 645-53.

198 MacLeod 2002, above n. 190, 145-6.

199 Shaw 1995, above n. 193, 253.

200 Ibid., 249.

201 McLeod 2005, above n. 194, 974.

minimize the natural inconsistencies that would arise in an impromptu retelling and that Members of the Board may misinterpret as lies. However, doing so may actually make it harder for him to recall the types of details that the Board relies upon as indicators of credibility.[202]

3.2 Gains

One study asked participants to narrate a childhood memory, and two months later asked them to tell it again. The younger participants (with an average age of twenty-eight) reported fewer than half of the same facts (46 per cent). The memories of older participants (with an average age of seventy-two) were slightly more stable; their second version contained 58 per cent of the same information. On the whole, the subjects' second accounts contained about 40 to 60 per cent brand-new information.[203]

The terms 'hypermnesia' and 'reminiscence' describe the phenomenon that accounts for these results: that we often remember more and more about an event each time we call it to mind.[204] When subjects are asked to describe a past experience as fully as they can, to take as much time as they need and to exhaust their memories,[205] when they return to the topic again at a follow-up interview, they will usually be able to produce more information, whether the interviews are five minutes, one day or six months apart.[206]

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[202] The merits of this credibility assessment strategy are suspect regardless. Some truth and deception studies have found a tendency among truth-tellers to give more detailed statements; M. Hartwig, P. A. Granhag, L. A. Strömwall & O. Kronkvist, 'Strategic use of evidence during police interviews: When training to detect deception works' (2006) 30 *Law C Human Behavior* 603-19. Others, however, have found no support for the theory that 'deceptive statements are less detailed than truthful statements', and have noted that one of the principle strategies that liars use to try to fool their interrogators is to make their story as detailed as possible. Granhag 2002, above n. 170, 255; Hartwig 2007, above n. 168, 220.

[203] Anderson 2000, above n. 181.

[204] 'Hypermnesia' refers to 'increases in net recall on successive trials', when any information that has been forgotten is factored out, whereas 'reminiscence' refers to 'gains in gross recall', without taking into account 'how many previously mentioned details are not provided again'. Turtle 1994, above n.180, 261.

[205] In a typical study, e.g., researchers gave an initial instruction of 'Please tell me everything you can', and followed it up with three probes: 'Can you remember anything else?' 'Can you tell me anything more' and 'Okay, do you think that's everything?' Bluck 1999, above n. 22, 674.

[206] D. La Rooy, M.-E. Pipe & J. E. Murray, 'Reminiscence and hypermnesia in children's eyewitness memory' (2005) 90 *Journal of Experimental Child Psychology* 235-54 at 249; see, e.g., Turtle 1994, above n.

In one of the first hypermnesia experiments, subjects who had watched a video of a violent burglary went from being able to describe an average of 38 per cent of the relevant details to 61 per cent, simply through repeated retrieval attempts.[207] Subsequent studies have found similar results outside of the laboratory. This phenomenon is apparent when crime witnesses who have been interviewed by police are later re-interviewed by researchers; in one case, 60 per cent of the information that the subjects provided to the researchers was new.[208] The new information was also demonstrably as accurate, a finding that has been noted predominantly, but not always, in studies where accuracy can be measured.[209] On the whole, there is little debate that hypermnesia is a 'consistent, robust and reliable phenomenon', and that it is common to see up to 50 per cent in net gain of largely reliable information through repeated testing.[210]

One theory for why this occurs is that 'once a person has initiated a search in memory, the search continues' after the initial task is over, even though the person 'may not be consciously aware of the process'.[211] This phenomenon helps to explain why we may wake up in the night remembering a name that we had been trying to recall during the day. Researchers also note that the act of remembering may be affected by the 'demand characteristics' of a memory task, by the subjects' impression of what is being asked of them and by their desire 'to please the interviewer by producing events about which they are being

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180; Barnier 2004, above n. 195; D. Dunning & L. B. Stern, 'Examining the generality of eyewitness hypermnesia: a close look at time delay and question type' (1992) 6 *Applied Cognitive Psychology* 643-57; Anderson 2000, above n. 181; Bluck 1999, above n. 22; R. P. Kern, T. M. Libkuman & H. Otani, 'Memory for negatively arousing and neutral pictoral stimuli using a repeated testing paradigm' (2002) 16 *Cognition C Emotion* 749-67.

[207] E. Scrivner & M. A. Safer, 'Eyewitnesses show hypermnesia for details about a violent event' (1988) 73 *Journal of Applied Psychology* 371-7 at 375.

[208] Although the researchers note that some of this increase was certainly due to the fact that the police had 'requested fewer object descriptions' than the researchers; Yuille 1986, above n. 33, 294.

[209] Bluck 1999, above n. 22; J. A. E. Gilbert & R. P. Fisher, 'The effects of varied retrieval cues on reminiscence in eyewitness memory' (2006) 20 *Applied Cognitive Psychology* 723-39; Dunning 1992, above n. 206; Scrivener 1988, above n.207; Turtle 1994, above n. 180; Herlihy 2002, above n. 110; but see, P. Eugenio, R. Buckhout, S. Kostes & K. E. Ellison, 'Hypermnesia in the eyewitness to a crime' (1982) 19 *Bulletin of the Psychonomic Society* 83-6.

[210] Dunning 1992, above n. 206, 644, 648.

[211] Herlihy 2002, above n. 110, 327.

questioned'.[212] Hypermnesic effects may be compounded by the fact that 'when people are asked to repeat information they have already given they usually assume that the first account is unsatisfactory in some way and may try to rectify this by supplying more and different details'.[213]

The strength of the hypermnesia/reminiscence phenomenon has led one team of researchers to conclude categorically that in a forensic context 'if a witness is inconsistent in testimony due to the addition of information, the witness should not be viewed as less credible'.[214] At the IRB, however, '*all* relevant and important facts should be included' in the first telling of the claimant's story, and while the Member may overlook the 'omission' of 'minor or elaborative details',[215] a claimant whose subsequent testimony contains *any* significant additions (let alone 40 to 60 per cent new information) is likely to be disbelieved – even though such 'reminiscent inconsistencies are natural, common occurrences that are frequently correct'.[216]

3.3 Distortions

What if claimants directly contradict their previous statements? Surely then they must be lying?

Studies of memory distortion in eyewitness and autobiographical memory typically interview or survey the same subjects twice. While some have found relatively few contradictions,[217] in a number of others around 20 per cent of the information provided by the participants on the second occasion directly conflicted with what they had reported on the first.[218] A team of researchers re-interviewed witnesses several months

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[212] D. C. Rubin & A. D. Baddeley, 'Telescoping is not time compression: A model of the dating of autobiographical events' (1989) 17 *Memory C Cognition* 653-61.

[213] Cohen 2001, above n. 3, 6; Herlihy 2009, above n. 3, 181.

[214] Kern 2002, above n. 206, 766.

[215] *Akhigbe v. Canada (Minister of Citizenship and Immigration)* [2002] FCJ No. 332 at para. 16; *Basseghi v. Canada (Minister of Citizenship and Immigration)* [1994] FCJ No. 1867 at para. 33 (emphasis added).

[216] Gilbert 2006, above n. 209, 737.

[217] T. Smeets, I. Candel, H. Merckelback, 'Accuracy, completeness, and consistency of emotional memories' (2004) 117 *The American Journal of Psychology* 595-609; Anderson 2000, above n. 181.

[218] R. P. Fisher & B. L. Cutler, 'The relation between consistency and accuracy of eyewitness testimony' in G. Davies, S. Lloyd-Bostock, M. McMurran & C. Wilson (eds.), *Psychology, Law and Criminal Justice:*

after the fatal shooting of an armed robber by police. One witness, who had told the police that the robber's car was red, told the researchers that it was either red or blue. Another 'correctly described the automobile as being a Falcon in the police interview', but told the reporters that it was a Chevrolet.[219] Another at first reported that a woman at the scene had 'rotting teeth and wore a yellow sweater and faded denims', but later recalled that she 'wore a red or yellow T-shirt and new denims and had very white teeth'.[220]

Attempts to define the boundaries of these types of memory changes have had little success (there appears to be no correlation, for example, with categories such as 'offender description', 'offender action', 'bystander description', 'bystander action', and 'objects').[221] And although peripheral information may be particularly susceptible to change,[222] it seems that no area of testimony is immune.[223] While the causes of such distortions are hotly debated, the findings from several areas of clinical exploration may be particularly relevant to refugee claimants.

Researchers have long recognized that what we hear from other people may positively or negatively affect our ability to recall our own experiences. On the one hand, eyewitnesses who discuss together their memories of a crime scene may be able to describe it more accurately

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International Developments in Research and Practice (New York, 1996) 21-8 at 26; Yuille 1986, above n. 33, 296; N. Brewer, R. Potter, R. Fisher, N. Bond & M. A. Luszcz, 'Beliefs and data on the relationship between consistency and accuracy of eyewitness testimony' (1999) 13 *Applied Cognitive Psychology* 297-313.

[219] Yuille 1986, above n. 33, 298. In the Washington DC sniper case, several eyewitnesses famously described the suspects' vehicle as a 'white or cream-coloured van', whereas in fact it was 'a dark blue Chevy Caprice'; Sharps 2007, above n. 129, 22. These types of errors are perhaps less surprising when we consider that, even under focused laboratory conditions, when 63 participants were given a recognition task involving photographs of cars, less than a quarter could correctly identify the target vehicles; Villegas 2005, above n. 126, 27; see also, G. Davies & N. Robertson, 'Recognition memory for automobiles: A developmental study' (1993) 31 *Bulletin of the Psychonomic Society* 103-6. The researchers posit an 'interest hypothesis' to explain this poor performance; one study, e.g., found that men and boys recognized cars better than women and girls, who in turn were better at recognizing female faces. The researchers theorize that this may be because men and boys are generally more interested in cars, whereas women and girls are generally more interested in . . . cosmetics. Davies 1993, above, 106.

[220] Yuille 1986, above n. 33, 298.

[221] Brewer 1999, above n. 218, 309.

[222] Herlihy 2002, above n. 110.

[223] Brewer 1999, above n. 218, 309.

than those who try to recall it alone.[224] Yet on the other hand, when we share our memories with others who have had the same or similar experiences, elements of their recollections may inadvertently become mixed with our own.

One Polish researcher interviewed recent high school graduates on two occasions four months apart and had them describe their memories of their final exam and graduation ball – events that form a famous rite of passage in Poland, one that might reasonably be considered 'unforgettable'.[225] Between interviews she showed them a video allegedly of another student describing her own experiences at the exam and the ball. This 'student' was in fact an actor and her description included a number of invented elements. When they were re-interviewed, twenty-nine of the thirty students incorporated some of these false elements into their own statements, sometimes contradicting their own previous reports. Of the fourteen false elements, eleven were incorporated by the students into their own memories.[226] Similar results were demonstrated in another study that sought to find out whether researchers could add an accomplice to the memories of crime scene witnesses, or else remove one. Forty participants were divided into two groups and were shown ostensibly the same video of a theft – except that in reality the video shown to the first group showed the thief acting on her own, whereas in the video shown to the second group the thief had an accomplice. After watching the video, each participant was surveyed individually and was asked, among other things, whether or not the thief had had an accomplice. In these individual surveys, thirty-nine of the forty answered this question correctly. The subjects were then paired with a participant from the other group and told to prepare a joint description of the event. Of the nineteen remaining pairs, fifteen came to agree on whether or not there had been an accomplice – meaning, of course, that in each case one of the two participants had changed his or her testimony.[227]

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[224] A. D. Yarmey & S. Morris, 'The effects of discussion on eyewitness memory' (1998) 28 *Journal of Applied Social Psychology* 1637-48.

[225] A. Niedzwienska, 'Distortion of autobiographical memories' (2003) 17 *Applied Cognitive Psychology* 81-91 at 89.

[226] Ibid.

[227] D. B. Wright, G. Self & C. Justice, 'Memory conformity: Exploring misinformation effects when presented by another person' (2000) 91 *British Journal of Psychology* 189-202; see also, C. R. Hollin & B.

The participants in these types of 'misinformation experiments' are typically 'unaware that they have changed their testimony or that they have been influenced by the new information', and they 'remain convinced that they are still reporting an independent memory of what they had originally observed'.[228] They often describe the incorporated 'memories' as very vivid;[229] in one study, 61 per cent of the subjects whose memories contained 'major distortions' reported being very confident in the accuracy of their recollections (giving them a four or five rating on a scale of one to five).[230] As the researchers note, these subjects are likely falling into the trap of believing that 'vividness was related to accuracy'.[231]

Researchers theorize that these types of distortions are caused by 'source monitoring errors', by the fact that 'memory for the source of the information fades more rapidly than memory for the content'.[232] Or, put another way, 'you often have information you directly observed *during* the event and information told to you *after* the event existing side by side and you cannot remember which is which'.[233] In everyday life, it may be impossible to avoid this type of memory contamination – after all, 'life is an ongoing misinformation experiment'.[234] Refugee claimants, who often

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R. Clifford, 'Eyewitness testimony: The effects of discussion on recall accuracy and agreement' (1983) 13 *Journal of Applied Social Psychology* 234-44.

[228] Haber 2000, above n. 2; see, S. M. Lane & M. S. Zaragoza, 'A little elaboration goes a long way: The role of generation in eyewitness suggestibility' (2007) 35 *Memory C Cognition* 1255-66.

[229] Niedzwienska 2003, above n. 225, 89.

[230] H. Schmolck, E. A. Buffalo & L. R. Squire, 'Memory distortions develop over time: Recollections of the O. J. Simpson trial verdict after 15 and 32 months' (2000) 11 *Psychological Science* 39-45. For memory in general, across a wide range of contexts, confidence has been found to be unrelated to accuracy. See, e.g., Yarmey 1998, above n. 224; U. Neisser & N. Harsch, 'Phantom flashbulbs: False recollections of hearing the news about Challenger' in E. Winograd & U. Neisser (eds.), *Affect and accuracy in recall: Studies of flashbulb memories* (Cambridge, UK: Cambridge University Press, 1992) 9-31, in S. M. Zola 'Memory, amnesia, and the issue of recovered memory: Neurobiological aspects' (1998) 18 *Clinical Psychology Review* 915-32; I. E. Hyman, Jr. & F. J. Billings, 'Individual differences and the creation of false childhood memories' (1998) 6 *Memory* 1-20 at 16; Brewer 1999, above n. 218.

[231] Niedzwienska 2003, above n. 225, 89.

[232] I. E. Hyman, Jr. & E. F. Loftus, 'Errors in autobiographical memory' (1998) 18 *Clinical Psychology Review* 933-47 (Hyman, Errors) at 938-9; see also, M. K. Johnson & C. L. Raye, 'Reality monitoring' (1981) 88 *Psychological Review* 67-85.

[233] Haber 2000, above n. 2, 1069 (emphasis in original).

[234] I. E. Hyman, Jr. & J. Pentland, 'The role of mental imagery in the creation of false childhood memories' (1996) *Journal of Memory and Language* 101-17 at 114.

stay in shelters, may come to know others who have had similar experiences. If they should share their stories, this may in turn affect their memories.

In addition, our recollections of our own past thoughts and emotions are highly variable; over time, this class of memory in particular 'is likely to change'.[235] One striking study surveyed twelve school employees six months after they had survived a shooting incident, and again after eighteen months. When it came to their thoughts and feelings during the attack, all of them changed their reports significantly. Many denied on the second occasion having had particular responses that they had previously reported (such as feeling sick, feeling worried, being angry, etc.). Others claimed on the second occasion to have experienced such thoughts and emotions, even though they had specifically denied them the first time. One response (I 'thought it could happen to me/loved ones') was changed by half of the subjects, with half of the changes in each direction.[236]

One explanation for the instability of such accounts is that there is, in fact, 'little evidence that people actually remember what they used to think and feel'.[237] Studies that have questioned people about their emotional states at the time of an event and then again afterwards have shown that we cannot reliably remember how happy we were on our vacations[238] or how stressed we were during our exams[239] or how upset, worried, sad or angry we were upon learning upsetting news.[240]

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[235] Kemp 2008, above n. 104, 133, in addition, 'researchers have frequently reported that both positive and negative affect fade with time, but that the latter fades faster'.

[236] E. D. Schwartz, J. M Kowalski & R. J. McNally, 'Malignant memories: Post-traumatic changes in memory in adults after a school shooting' (1993) 6 *Journal of Traumatic Stress* 545-53.

[237] Hyman, Errors 1998, above n. 232, 942; see also, L. J. Levine & M. A. Safer, 'Sources of bias in memory for emotion' (2002) 11 *Current Directions in Psychological Science* 169-73; B. L. Fredrickson & D. Kahneman, 'Duration neglect in retrospective evaluations of affective episodes' (1992) 65 *Journal of Personality and Social Psychology* 45-55; L. J. Levine, 'Reconstructing memory for emotions' (1997) 126 *Journal of Experimental Psychology: General* 165-77; D. L. Thomas & E. Diener, 'Memory accuracy in the recall of emotions' (1990) 59 *Journal of Personality and Social Psychology* 291-9.

[238] Kemp 2008, above n. 104.

[239] R. E. Smith, T. R. Leffingwell, J. T. Ptacek, 'Can people remember how they coped? Factors associated with discordance between same-day and retrospective reports' (1999) 76 *Journal of Personality and Social Psychology* 1050-61.

[240] S.-A. Christianson & E. Engelberg, 'Memory and emotional consistency: The MS *Estonia* ferry disaster' (1999) 7 *Memory* 471-82; L. J. Levine, C. K. Whalen, B. Henker & L. D. Jamner, 'Looking back on September 11, 2001: Appraised impact and memory for emotions in adolescents and adults' (2005) 20 *Journal of Adolescent Research* 497-523.

Researchers propose that when we are unable to access such information from memory, our self-concept helps us 'to fill in the gaps':[241] we subconsciously use what we know about ourselves to infer what we must have thought or how we must have felt. As our self-concept evolves, our inferences change.[242] Refugee claimants are regularly probed about their past thoughts and emotions at a time in their lives when their self-concept may be changing rapidly as they adjust to a new environment. There is every reason to think that these types of memories in particular will be especially liable to change.

Another finding of particular importance for refugee claimants is the fact that, although there is some evidence that negative events may in general be remembered better than positive ones,[243] memories of shocking and upsetting events are certainly not immune to distortion. Over thirty years ago, psychologists Brown and Kulik famously coined the term 'flashbulb memory' to describe an unusually vivid memory of a shocking, usually negative, event. The term is perhaps misleading; as others have recently pointed out, even Brown and Kulik agreed that 'such memories, while vivid, are far from complete and are not perfect, immutable photographs of the past experience'.[244] Rather, 'flashbulb memories seem to be subject to the same kinds of reconstruction and error over time as other memories'[245] and they 'often change over time, unbeknownst to the rememberer'.[246] As observed in a recent and comprehensive review of flashbulb memory research to date, 'All

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[241] Hyman 1996, above n. 234, 104; Smith 1999, above n. 239, 1059.

[242] This is in keeping with other studies that have demonstrated a 'hindsight bias' in other memory contexts. These studies have shown that 'memories may be altered to confirm with current beliefs and attitudes', that through involuntary processes our recollections 'can be edited in the light of later experiences'. Williams 2008, above n. 33, 78.

[243] For a review, see, G. S. Goodman & A. Melinder, 'The development of autobiographical memory: A new model' in S. Magnussen & T. Helstrup (eds.), *Everyday Memory* (New York: 2007), 111-34 at 117.

[244] M. Julian, J. N. Bohannon III & W. Aue, 'Measures of flashbulb memory: Are elaborate memories consistently accurate?' in O. Luminet & A. Curci (eds.) *Flashbulb Memories: New issues and new perspectives* (New York: 2009), 99-122 at 99.

[245] R. Fivush, J. Bohanek, K. Marin & J. McDermott Sales, 'Emotional memory and memory for emotions' in Luminet 2009, ibid., 163-84 at 163.

[246] R. J. McNally, *Remembering Trauma* (Cambridge: 2003), 55.

researchers agree' that such memories may become distorted,[247] although whether or not they are more consistent than other types of autobiographical memories remains the subject of debate.[248] Some researchers have documented cases where memories of shocking emotional events do 'exhibit remarkable persistence, clarity and detail'.[249] Others, however, conclude that while flashbulb memories 'are distinguished from ordinary memories by their vividness and the confidence with which they are held', there is 'little evidence that they are reliably different from ordinary autobiographical memories in accuracy, consistency or longevity'.[250] Regardless, the fact that such memories can change a great deal over time and can be 'remarkably inaccurate'[251] has been conclusively demonstrated.

One study tested the consistency of Canadian university students' memories for the terrorist attacks of September 11, 2001. The researchers surveyed 1,400 students shortly after the attacks and again eight months later, and asked them how they had heard the news: where they were, who they were with, and what they were doing. At the second testing, 'the overall level of consistency' was 'poor'. More than one in ten students (11.8 per cent) had clear and vivid memories of where they had been, who they had been with, and what they had been doing on perhaps the most memorable morning in recent history – that were wrong on all counts.[252] In another study with a similar methodology, 'only 65 per cent of the personal event information given after six months was the same as that given after one week'.[253] Another found that its subjects' memories for the events of September 11th were no

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[247] D. B. Pillemer, '"Hearing the news" versus "being there": Comparing flashbulb memories and recall of first-hand experiences' in Luminet 2009, above n. 244, 125-40 at 138.

[248] Williams 2008, above n. 33, 69; O. Luminet & A. Curci, 'Introduction' in Luminet 2009, above n. 244, 1-9 at 4.

[249] Williams 2008, above n. 33, 69; for a review, see, McNally 2003, above n. 246, 53-5.

[250] J. T. Talarico & D. Rubin, 'Flashbulb memories result from ordinary memory processes and extraordinary event characteristics' in Luminet 2009, above n. 244, 79-97 at 92.

[251] Schmolck 2000 at 39; for review, see, A. E. van Giezen, E. Arensman, P. Spinhoven & G. Wolters, 'Consistency of memory for emotionally arousing events: A review of prospective and experimental studies' (2005) 25 *Clinical Psychology Review* 935-53 at 937.

[252] P. J. Lee & N. R. Brown, 'Delay related changes in personal memories for September 11, 2001' (2003) 17 *Applied Cognitive Psychology* 1007-15 at 1013.

[253] M. C. Smith, U. Bibi & D. E. Sheard, 'Evidence for the differential impact of time and emotion on personal and event memories for September 11, 2001' (2003) 17 *Applied Cognitive Psychology* 1054.

more consistent than their memories for the everyday events of the weekend preceding the attacks.[254] As yet another similar study concluded, 'There was very little evidence to suggest that September 11th led to highly detailed and veridical autobiographical records of the day'.[255]

These studies were building on a famous earlier experiment that had tested its subjects' memories for the explosion of the Challenger space shuttle. The Challenger study had asked participants to describe the circumstances under which they had heard the news, first one day after the explosion and again about two years later. Most of the accounts 'showed major discrepancies'; in total, only 7 per cent of the participants gave completely consistent accounts, compared with 25 per cent who were 'inconsistent on all questions'.[256] One subject reported the following after twenty-four hours:

I was in my religion class and some people walked in and started talking about it then after class I went to my room and watched the TV program talking about it and I got all the details from that.[257]

Here is the same subject, two years later:

When I first heard about the explosion I was sitting in my freshman dorm room with my roommate and we were watching TV. It came on a news flash and we were both totally shocked.[258]

Similar results were reported for the announcement of the O. J. Simpson verdict. Students were tested three days after the verdict, and again after fifteen months and thirty-two months. After fifteen months, 10 per cent of the accounts contained 'major distortions'; after thirty-two months, the percentage had risen to 42 per cent. In a typical example, one subject reported after three days:

I was in the Commuter Lounge at Revelle [College] and saw it on T.V. As 10:00 approached, more and more people came into the room. We kept having to

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[254] J. M. Talarico & D. C. Rubin, 'Flashbulb memories are special after all; in phenomenology, not accuracy' (2007) 21 *Applied Cognitive Psychology* 557-78.

[255] S. R. Schmidt, 'Autobiographical memories for the September 11th attacks: Reconstructive errors and emotional impairment of memory' (2004) 32 *Memory C Cognition* 443-54 at 451.

[256] Neisser 1992, above n. 230, in van Giezen, above n. 251, 945.

[257] Neisser, ibid., in Zola 1998, above n. 230, 926.

[258] Ibid.

turn up the volume, but it was kind of cool. Everyone was talking.[259]

The same subject after thirty-two months reported:

I first heard it while I was watching TV. At home in my living room. My sister and father were with me. Doing nothing in particular, eating and watching how the news station was covering different groups of viewers just waiting to hear the verdict. I think that the focus was mostly on law students and their reactions to the verdict.[260]

One explanation that has been suggested to account for these types of inconsistencies is that they may be the result of 'time-slice errors'. On the subsequent tests the subjects may be recalling a later related event and misattributing it to 'the first time I heard the news'.[261] When the students in the O. J. Simpson study were asked about their inconsistent statements, many 'claimed that both events occurred'. The researchers theorized that these students 'may have reported an event associated with receiving news regarding the trial, but not the event requested'.[262] Time-slice errors may explain some of the distortions that refugee status decision makers frequently encounter.

Subsequent studies suggest that when subjects are personally involved in a shocking event, as opposed to simply learning about it, their memories for its central elements ('location, activity, and others present') may be much more consistent.[263] On the other hand, the eyewitness study mentioned at the beginning of this section is cited as a classic example of a 'real' and 'traumatic' flashbulb memory of a directly experienced event[264] and, as set out above, the distortions in the subjects' memories for details are striking. In addition, studies of soldiers, peacekeepers, and crime victims show some of the most dramatic examples of memory distortions for even the central elements of lived events.[265] One typical study surveyed Desert Storm veterans

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[259] Schmolck 2000, above n. 230, 41.

[260] Ibid.; for a comprehensive review of other emotional memory consistency studies, see, R. G. Winningham, I. E. Hyman Jr. & D. L Dinnel, 'Flashbulb memories? The effects of when the initial memory report was obtained' (2000) 8 *Memory* 209-16.

[261] Hyman, Errors 1998, above n. 232, 940; Brewer 1999, above n. 218; Herlihy 2002, above n. 110.

[262] Hyman, ibid., 940-1

[263] U. Neisser, E. Winograd, E. T. Bergman, C. A. Schreiber, S. E. Palmer & M. S. Weldon, 'Remembering the Earthquake: Direct Experience vs. Hearing the News' (1996) 4 *Memory* 337-58 at 338; N. Er, 'A new flashbulb memory model applied to the Marmara earthquake' (2003) 17 *Applied Cognitive Psychology* 503-17.

[264] Pillemer 2009, above n. 247, 132.

[265] S. M. Southwick, MD, C. A. Morgan III MD, A. L. Nicolaou, PhD & D. S. Charney, MD, 'Consistency of

shortly after their return home and again about two years later. The veterans were asked 19 'yes/no' questions about their experiences in the war: Did you see 'others killed or wounded?' Did you see 'bizarre disfigurement of bodies?' Did you 'observe the death of a close friend?' Eighty-eight percent changed at least one of their answers; just under one in ten (8 per cent) changed a third of their answers (for the three questions above, the change rate was 27 per cent, 33 per cent and 8.5 per cent respectively). The changes ran in both directions, with 70 per cent claiming to have experienced something at the second interview that they had denied at the first, and 46 per cent specifically denying at the second interview something that they claimed to have experienced at the first.[266]

The literature on trauma memory, which as noted at the outset is beyond the scope of this article, is doubtless crucial to understanding not only these findings, but also many of the memory distortions encountered in the refugee hearing room. It is worth noting, however, that whereas several of the above studies found a link between these kinds of memory shifts and the subjects' diagnoses of Post Traumatic Stress Disorder (PTSD),[267] another found no significant PTSD correlation.[268] This suggests, at the very least, that other psychological factors may be acting on these types of memories. Researchers propose 'a number of possible explanations' for these changes other than trauma: for example, 'processes of social desirability' may lead the

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memory for combat-related traumatic events in veterans of Operation Desert Storm' (1997) 145 *American Journal of Psychiatry* 173-7; I. Bramsen, A. J. E. Dirkzwager, S. C. M. van Esch & Henk M. van der Ploeg, 'Consistency of self-reports of traumatic events in a population of Dutch peacekeepers: Reason for optimism' (2001) 14 *Journal of Traumatic Stress* 733-40; S. Wessely, C. Unwin, M. Hotopf, L. Hull, K. Ismail, V. Nicolaou & A. David, 'Stability of recall of military hazards over time' (2003) 183 *British Journal of Psychiatry* 314-22; Schwarz 1993, above n. 236; L. Roemer, B. T. Litz, S. M. Orsillo, P. J. Ehlich and M. J. Friedman, 'Increases in retrospective accounts of war-zone exposure over time: the role of PTSD symptom severity' (1998) 11 *Journal of Traumatic Stress* 597-605; K. E. Krinsley, J. G. Gallagher, F. W. Weathers, C. J. Kutter & D. G. Kaloupek, 'Consistency of retrospective reporting about exposure to traumatic events' (2003) 16 *Journal of Traumatic Stress* 399-409. Memories of rape, in particular, have been found to be 'less "flashbulb"-like than other unpleasant memories'. Fivush 2009, above n. 245, 166.

[266] Southwick 1997, ibid. Some researchers have suggested that our memories may show more consistency when the first test is delayed: Winningham 2000, above n. 260. Yet in one study, similar results were found even when the first interview was held a full three years after the subjects had returned home from the war-zone. As in Southwick 1997, ibid., between this first delayed interview and the second a year later, 88 per cent of the respondents changed at least one of their answers and 12 per cent changed more than a quarter. Bramsen 2001, ibid.

[267] Southwick 1997, ibid.; Roemer 1998, above n. 265.

[268] Bramsen 2001, above n. 265.

subjects to give answers 'that are more in concordance with how they want to present themselves'; they may interpret questions differently over time; their answers may differ depending on 'differences in context, mood or attention'; or their memories may have been influenced by 'postevent information' such as media reports.[269] Whatever the cause or causes of these types of memory distortions, it is clear that memory for shocking and upsetting events is not immune to significant change.

When a claimant's testimony has changed, the decision maker may well question the accuracy of her recollection on the point in question, although eyewitness research has demonstrated that consistency in testimony is not 'a strong predictor of *overall* accuracy'.[270] The most consistent witnesses are not reliably the most accurate, for two reasons: a witness who significantly misremembers one aspect of an event may nonetheless remember others very clearly,[271] and people can misremember important details and still correctly recall the general gist of a situation.[272] When IRB Members focus on these types of distortions at a refugee hearing, however, they are hardly ever interested in the *accuracy* of the point in question. Whether the car was red or blue, whether it was a Chevrolet or a Falcon is normally irrelevant. Instead, decision makers are interested in the simple fact that the claimant's story has changed, and what this says about her *credibility*.[273] Yet what these many studies have documented are common failures of memory, not of honesty.

A very few people have astonishingly stable memories,[274] but for most of us, substantial memory changes are common and well documented. In light of this, and until more is known about why and under what circumstances these kinds of distortions occur, when contradictions do

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[269] Ibid., 739.

[270] Brewer 1999, above n. 218, 311 (emphasis added); see also, Gilbert 2006, above n. 209; Fisher 1996, above n. 218; Smeets 2004, above n. 217.

[271] Fisher 1996, Brewer 1999, Gilbert 2006, ibid., Yuille 1986, above n. 33, 299.

[272] Bidrose 2000, above n. 111; Bluck 1999, above n. 22; Herlihy 2002, above n. 110.

[273] A recent study found that members of the Swedish Migration Board, e.g., relied on contradictions 'to a relatively large degree', which the researchers cautioned may be 'a too simplistic' approach; Granhag, Migration 2005, above n. 167, 43. As another researcher noted in regard to the sixty-two participants in his study, all but two of whom made contradictory statements at their second interview, 'virtually all of the witnesses' testimonies would have been vulnerable to being discredited to some degree', despite their truthfulness and overall accuracy: Brewer 1999, above n. 218, 310.

[274] For a review, see, E. S. Parker, L. Cahill & J. L. McGaugh, 'A Case of Unusual Autobiographical Remembering' (2006) 12 *Neurocase* 35-49.

arise in a claimant's testimony the decision maker cannot mechanically assume that he is a liar who cannot keep his story straight.

3.4 A note about test conditions

Many refugee claimants have two potential advantages that the subjects in most of these consistency studies did not. First, if they have competent counsel, they will very likely have reviewed their previous statements ahead of time. This may reduce the inconsistencies arising in their testimony, although researchers controlling for this variable have found that it had 'strikingly little effect': their ability to review their previous statements 'did not inhibit witnesses' tendency to recall new details' and 'neither did it improve or refresh their memory as intuition might predict'.[275] This may be because, as noted above, people recounting their own memories in investigations generally 'try to remember what they actually have experienced' rather than 'what they have said in previous interrogations'.[276]

In addition, unlike the subjects in many of these studies, who were asked to recall events that they may have had little cause to think about between tests, refugee claimants are recounting experiences that they may have thought about often (although many claimants, of course, describe pushing these thoughts from their minds, an 'avoidant memory style' that is a well-documented response to negative life events).[277] There is good evidence that 'memories which are often recalled or thought about are remembered more vividly' than those that are called to mind infrequently.[278] While they may be more vivid, however, such memories are 'not significantly more stable'; researchers controlling for this variable have found major changes even in oft-recalled memories.[279]

Whether or not these potential advantages indeed benefit claimants as

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[275] Turtle 1994, above n. 180, 226; see also, Bidrose 2000, above n. 111, where the subjects' ability to review physical evidence had similarly little effect on their memories.

[276] Granhag 2002, above n. 170, 245.

[277] See, e.g., D. Hermans, A. de Decker, S. de Peuter, F. Raes, P. Eelen & J. M. G. Williams, 'Autobiographical memory specificity and affect regulation: Coping with a negative life event' (2008) 25 *Depression and Anxiety* 787-92 at 787; Herlihy 2009, above n. 3, 184.

[278] Anderson 2000, above n. 181, 440; Betz 1997, above n. 8.

[279] Anderson 2000, above n. 181, 440

minimally as the evidence suggests, they must also be balanced against three serious disadvantages. Taken together, these suggest that claimants will exhibit as much, if not more, inconsistency in their testimony than that which has been reported in the research.

The first is the standard use of inconsistent retrieval methods by refugee status decision makers. Two of the main types of questions asked of subjects in memory research are 'free recall' questions, in which they are simply asked to set out what they remember in as much detail as possible ('Describe all of the significant events and reasons that led you to seek protection in Canada'), and 'cued recall' questions, in which the researcher or investigator guides the subjects' recollection with specific prompts ('And then what did he say?', 'Did she do anything else?', 'Was anyone else there?'). As many studies have shown, these different types of cues will elicit different types of information.[280] As a result, 'in order to assess (in) consistency, assessments using exactly the same instrument should be performed',[281] because 'if different retrieval cues are used at Tests 1 and 2, then different recollections will emerge on the two tests'.[282]

Inconsistent cueing 'significantly' increases hypermnesia.[283] It will produce 'quite different estimates' of dates,[284] as will asking for exact dates rather than relative time estimates.[285] Frequency estimates will change depending on 'the use of closed or open-ended questions',[286] and, as noted above, 'the way in which questions are asked' can similarly produce 'very different estimates of the duration' of an event.[287] The sequence of events and event components,[288] instances of repeated events,[289] and the content of

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[280] For a review, see, Dunning 1992, above n. 206; see also, Brewer 1999, above n. 218; H. P. Bahrick, L. K Hall & L. A. Da Costa, 'Fifty years of memory of college grades: Accuracy and distortions' (2008) 8 *Emotion* 13-22; Bidrose 2000, above n. 111.

[281] Van Giezen 2005, above n. 251, 937.

[282] Gilbert 2006, above n. 209, 725; see also, Fisher 1996, above n. 218, 26.

[283] Cohen 1995, above n. 6; Bidrose 2000, above n. 111; Gilbert 2006, ibid.

[284] Loftus 1990, above n. 18, 332; Sudman 1984, above n. 52.

[285] Janssen 2006, above n. 9; J. Huttenlocher, L. V. Hedges & N. M. Bradburn, 'Reports of elapsed time: Bounding and rounding processes in estimation' (1990) 16 *Journal of Experimental Psychology: Learning, Memory, and Cognition* 196-213.

[286] Belli 1998, above n. 47, 384.

[287] Pederson 2002, above n. 67, 771, 773; Burt 1996, above n. 65.

[288] Burt, Time 2008, above n. 5, 134.

conversations[290] are all better brought to mind by cued rather than free recall, as are older memories that have simply faded with time.[291] Researchers have also suggested that these effects may be compounded when the retrieval method shifts between 'face-to-face' interviews and 'self-administered questionnaires'.[292]

In light of these findings, it has been suggested that criminal investigators make a practice of varying retrieval cues to try to obtain as much different information as possible.[293] And one likely could not design a retrieval methodology that would produce greater inconsistencies than one that gives its subjects a self-administered free recall form to fill out and then invites them to a face-to-face interview and asks them cued recall questions.

The second disadvantage for claimants is the passage of time. Most of the studies on memory consistency span relatively short time periods compared with the average time that a claimant will spend in the refugee claim process. Even so, the researchers note two key 'retention interval effects':[294] the more time passes between tests, the lower the subjects' consistency;[295] and the more time passes, the more likely it is that an event will slip their minds entirely on an open-ended survey question. The latter often leads to 'gross under-reporting of even distinctive events'.[296] One typical study asked its subjects whether they had ever been hospitalized; the respondents 'failed to report only 3 per cent of hospitalizations when asked within 1 to 10 weeks of the event, but failed to report 42 per cent of hospitalizations when asked 1 year after the event'.[297] Another asked its subjects whether they had ever been in an automobile accident 'that had resulted in their own personal injury'. Of those who had suffered such an accident within the last three months,

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[289] Cohen 1995, above n. 6, 285.

[290] Campos 2006, above n. 154; Pezdek 1993, above n. 159, 305.

[291] Wagenaar 1986, above n. 13.

[292] S. Sudman & N. M. Bradburn, 'Effects of time and memory factors on response in surveys' (1973) 68 *Journal of the American Statistical Association* 805-15 at 815.

[293] Gilbert 2006, above n. 209, 735.

[294] Jobe 1993, above n. 101, 569.

[295] See, e.g., Herlihy 2002, above n. 110; Schmolck 2000, above n. 230.

[296] Belli 1998, above n. 47, 384

[297] Belli 2001, above n. 109, 46; for a review, see, Jobe 1993, above n. 101.

hardly any (4 per cent) failed to note it; but of those for whom the incident had occurred nine to twelve months earlier, more than a quarter (27 per cent) failed to report it.[298] Similar results have been found for periods of unemployment[299] and crime victimizations.[300] The problem is not that by the second test the subjects in these studies have genuinely forgotten their hospitalization, car accident or victimization. Rather, their memories of these events are somehow not triggered by the free recall question. This presents obvious challenges for refugee claimants and survey methodologists alike.

The third disadvantage for the claimant is, of course, the 'herd of elephants' in the hearing room: the cultural and gender factors, trauma, stress, fatigue, and language and interpretation issues, to name a few.[301] As Herlihy and Turner point out, a refugee claimant recalling an experience is 'constructing an account of that event, within a social or conversational context'.[302] In determining how that memory will be framed as a narrative, 'the entire social context – involving the interviewer, the interviewee, and the context of the interview – has a part to play'.[303] Herlihy and Turner emphasize forcefully that many aspects of the social context at a refugee hearing may undermine the claimant's ability to recall her experiences.

The Federal Court of Canada has wisely noted that 'A refugee claim

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298 Belli 2001, ibid., 46.

299 N. Mathiowetz, 'The problem of omissions and telescoping error: New evidence from a study of unemployment', Proceedings of the Section on Survey Research Methods (American Statistical Association, 1986) in Belli 1998, above n. 47.

300 J. M. Bushery, 'Recall biases for different reference periods in the National Crime Survey', Proceedings of the Section on Survey Methods Research (American Statistical Association, 1981) 238-42 in Jobe 1993, above n. 101.

301 For a sense of the latter, see, *Sherpa v. Canada (Minister of Citizenship and Immigration)* [2009] FCJ No. 665, in which the Court found that an interpreter was 'sufficiently precise and competent to convey [the claimant's] words on the material points of concern', even though she had on several occasions mistranslated the Board's questions to the claimant, and had 'inaccurately translated her answers and explanations, as well as adding words she had not said'; even though she had on 270 occasions used English words in interpreting to the claimant; and even though she 'acknowledged during the hearing that [the claimant] was having difficulty understanding her because they were from different localities and had different accents' (at paras. 23-4, 57).

302 Herlihy 2009, above n. 3, 179.

303 Ibid., 180.

should not be decided on the basis of a memory test'.[304] If it were, such test conditions would be strikingly unfair.

4. Conclusion

In truth and deception studies, the subjects who had been instructed to lie reported using a number of strategies to try to convince their interrogators, such as: 'Include many details', 'Avoid saying things that [are] not true', 'Stick with the story', and 'Try to make the story seem spontaneous'. Those who had been instructed to tell the truth provided only two: 'Tell the truth like it happened', and try to be 'cooperative'.[305] Many of the truthful subjects reported: 'I did not need a strategy because I am innocent'.[306] The researchers remarked that the truth-tellers' plan simply to tell the truth 'did not appear to serve them well'.[307] They were often disbelieved.[308]

As noted above, professional lie-detectors as a rule have 'hit rates just above the level of chance',[309] and they 'tend to be overconfident in their judgments'.[310] Refugee status decision makers face a typical compounding challenge: experience alone will not help them to improve. Since they can rarely verify whether or not their decisions were correct, they are rarely able to learn from their mistakes.[311] Researchers propose a 'feedback hypothesis' – a theory that without such feedback 'mere on-the-job experience is not enough . . . to improve lie detection accuracy' – to help

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[304] *Sheikh v. Canada (Minister of Citizenship and Immigration)*, above n. 1, para. 28.

[305] Hartwig 2007, above n. 168, 220.

[306] Ibid., 224.

[307] Ibid., 225.

[308] Researchers note that this 'illusion of transparency' – our common belief that our 'inner states are visible to a higher degree than is really the case' and that 'innocence will shine through' – may in fact 'put innocent suspects at risk'; Ibid., 214; T. Gilovich, K. Savitsky & V. H. Medvec, 'The illusion of transparency: Biased assessments of others' ability to read one's emotional states' (1998) 75 *Journal of Personality and Social Psychology* 332-46; see also, S. M. Kassin & R. J. Norwick, 'Why people waive their Miranda rights: The power of innocence' (2004) 28 *Law C Human Behavior* 211-21.

[309] Hartwig 2007, above n. 168, 213; see also, Granhag 2000, above n. 168; C. F. Bond Jr. & B. M. DePaulo, 'Individual Differences in Judging Deception: Accuracy and Bias' (2008) 134 *Psychological Bulletin* 477-92.

[310] Granhag 1999, above n. 169, 165.

[311] As the researchers note, such decision makers 'rarely receive any reliable outcome feedback about the correctness of their veracity assessments'; Granhag, Migration 2005, above n. 167, 30.

explain why the credibility assessments of Swedish Migration Board Members failed to improve over time (although the Members became more confident in their judgments),[312] or why, in another study, the subjects who performed fewer lie detection exercises were more accurate than those who performed more,[313] or why, in a number of experiments, experienced lie catchers, such as veteran police detectives, were no better than university students at making credibility assessments.[314] As the researchers in several such studies concluded, the veteran detectives were no more accurate, just more confident and more biased.[315]

The purpose of this article is to help refugee status decision makers to make better credibility determinations. One of the main ways in which lie detectors can improve is by learning to 'avoid paying attention to non-diagnostic cues'.[316] While gaps or inconsistencies in a claimant's testimony may in some cases reasonably lead to a negative finding, the research makes it abundantly clear that such aspects are often misleading. They should be approached 'with great caution'.[317] They should never be used 'in a mechanical fashion',[318] and, crucially, the bar must be set much lower.

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[312] Granhag, Migration 2005, above n. 167; Granhag 1999, above n. 169.

[313] Strömwal 2003, above n. 167.

[314] S. M. Kassin, C. A. Meissner & R. J. Norwick, '"I'd know a false confession if I saw one": A comparative study of college students and police investigators' (2005) 29 *Law C Human Behavior* 211-27; B. M. DePaulo & R. L. Pfeifer, 'On-the-job experience and skill at detecting deception' (1986) 16 *Journal of Applied Social Psychology* 249-67; for a review, see, P. Ekman & M. O'Sullivan, 'Who can catch a liar?' (1991) 46 *American Psychologist* 913-20 at 913. A noted exception were US Secret Service agents, whose lie-detection accuracy in one famous study was found to be significantly higher than average, possibly because they had learned to rely more heavily on 'non-verbal' cues; Ekman 1991, above; and P. Ekman & M. O'Sullivan, 'Who is misleading whom?: A reply to Nickerson and Hammond' (1993) 48 *American Psychologist* 989-90. Other studies have since found that other professionals who similarly rely on 'behavioral clues' are also able to achieve better-than-average lie-detection accuracy; P. Ekman, M. O'Sullivan & M. G. Frank, 'A few can catch a liar' (1999) 10 *Psychological Science* 263-6. However, for a recent methodological criticism of these studies, suggesting that the better-performing subjects may in fact have had an unfair advantage, see, C. F. Bond Jr., 'Commentary: A few can catch a liar, sometimes: Comments on Ekman and O'Sullivan (1991), as well as Ekman, O'Sullivan, and Frank (1999)' (2008) 22 *Applied Cognitive Psychology* 1298-1300.

[315] The bias to which the researchers refer is 'investigator bias', the tendency of those looking for deception to find it where none exists; Kassin 2004, ibid., 213.

[316] A. Vrij, 'Why professionals fail to catch liars and how they can improve' (2004) 9 *Legal and Criminal Psychology* 159-81 at 171.

[317] Granhag 2003, above n. 170, 864.

[318] Granhag, Migration 2005, above n. 167, 43.

One consistently striking feature of these many memory studies is just how low the researchers set the bar. In the language of memory researchers, even 'excellent memory' is very far from perfect, and still 'inevitably' becomes distorted.[319] A subject demonstrates a 'high degree of consistency' when she directly contradicts only 20 per cent of her previous testimony,[320] and is doing 'relatively well' when she misremembers only 20 per cent of her most memorable personal event dates from within the last ten weeks.[321] Such a claimant would be judged a liar by many IRB Members.[322]

Criminal judges, prosecutors and police must regularly decide not only whether a witness is credible but also whether her memory is reliable: an accused's liberty may depend on whether the car was red or blue. Refugee status decision makers, in contrast, must decide whether the fact that the car was red and is now blue is enough to displace the presumption that a claimant who has sworn to tell the truth is telling the truth to the best of her ability.[323] The more they understand about how memory works, the better their decisions will be.

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[319] McNally 2003, above n. 246, 125, 117.

[320] Yuille 1986, above n. 33, 296.

[321] Betz 1997, above n. 8, 713.

[322] While the reality in the hearing room is often different, it is worth noting that a lowered bar is certainly in keeping with the IRB's official policy. The Board's training materials sensibly instruct Members as follows: 'Remember - sworn testimony is presumed true'; 'Do Not Expect the Witness to Have Perfect Recall: Refugee claimants, like all people, and sometimes with more justification than most, may be unable to recall some information. Times, dates, locations, distances, external events, and even significant personal experiences may be forgotten or distorted by time'; and 'Do Not Press the Witness For Too Many Details: People do not perceive all of the details of any given event and if you press witnesses for too much detail, they may unconsciously 'fill' in the details they can't remember'. Immigration and Refugee Board, 'IRB Questioning Techniques', undated, 13.

[323] In Canada, this presumption has the force of law: *Maldonado v. Canada (Minister of Citizenship and Immigration)* [1979] FCJ No. 248. For a review of its role internationally in the refugee context, see, M. Kagan, 'Is Truth in the Eye of the Beholder – Objective Credibility Assessment in Refugee Status Adjudication' (2003) 17 *Georgetown Immigration Law Journal* 367-415. Kagan concludes: 'Forcing applicants to "prove" their credibility would impose an effective limit on the protection accorded by the Refugee Convention, which is not authorized by the treaty and which many genuine applicants could not overcome. Given that credibility is not an actual criterion for refugee status, applicants cannot be expected to establish credibility as if it were part of their burden of proof. Rather, applicant testimony is a means by which asylum-seekers can prove the substantive criteria for refugee status. These considerations call for beginning refugee status determinations with the presumption that the applicant will be truthful, which can be rebutted if there is substantial reason to reject credibility', 374.