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Adversarial Growth in Olympic Swimmers: Constructive Reality or Illusory Self-Deception?

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## 29 Abstract

30 Previous research suggests that adversarial growth is a real and constructive phenomenon that  
31 occurs in athletes who compete at the highest level of sport. In this study, however, we adopt a  
32 critical stance on the veridicality of growth by exploring Olympic swimmers' experience of  
33 constructive *and* illusory growth. Semi-structured interviews, complemented by timelining, were  
34 undertaken with four international swimmers (two male and two female) who were aged between  
35 17 and 27 years at their first participation at an Olympic Games and who had experienced a  
36 number of significant adversities. The interviews and timelines were analyzed using  
37 interpretative phenomenological analysis. Despite the inherently negative aspects of adversity, it  
38 was evident from the swimmers' interpretations that they also perceived positive consequences of  
39 their experiences. Analysis revealed that some of these positive outcomes were indicative of  
40 illusory aspects of growth (e.g., seeking meaning, cognitive manipulations), while other positive  
41 outcomes were more indicative of constructive aspects of growth (e.g., finding meaning,  
42 cognitive processing). Prior to growth occurring all of the participants used denial as a short-term  
43 palliative coping strategy. It appears that earlier phases of the growth process were characterized  
44 by more illusory aspects of growth, whereas when the temporal proximity from the adversity  
45 increased and the swimmers accepted their adversities, more constructive aspects of growth are  
46 apparent.

47 *Keywords:* development, elite, functional, illusion, interpretative, sport

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## 49 Adversarial Growth in Olympic Swimmers: Constructive Reality or Illusory Self-Deception?

50 A growing body of research has shown that individuals can positively change following  
51 adversity to the extent that they report development beyond their pre-trauma functioning (see, for  
52 a review, Linley & Joseph, 2004). This growth typically involves an increased appreciation for  
53 life, more meaningful relationships, an increased sense of personal strength, a change in priorities,  
54 and a richer existential and spiritual awareness (Tedeschi & Calhoun, 2004). Various terms have  
55 been used to conceptualize growth including posttraumatic growth (PTG; Tedeschi & Calhoun,  
56 1996), stress-related growth (SRG; Park, Cohen, & Murch, 1996), and adversarial growth (Linley  
57 & Joseph, 2004). Several theoretical explanations of growth have been proposed (viz., Joseph &  
58 Linley, 2006; Zoellner & Maercker, 2006a) including a functional descriptive model (FDM) of  
59 PTG (Calhoun, Cann, & Tedeschi, 2010; Calhoun & Tedeschi, 1998; Tedeschi & Calhoun, 1995,  
60 2004), an organismic valuing theory (OVT) of growth through adversity (Joseph & Linley, 2005),  
61 and an affective-cognitive processing model (ACPM) of PTG (Joseph, Murphy, & Regel 2012).  
62 These models posit that growth arises out of a person's struggle to deal with the shattered self (cf.  
63 Janoff-Bulman, 1992) that occurs as a result of a traumatic experience. This involves interaction  
64 between a variety of person and situational variables, central to which is an individual's cognitive  
65 processing, that leads to the experience of constructive growth.

66 In the study reported in this paper we focus on adversarial growth in elite sport.  
67 Adversarial growth has been conceived as the changes that occur through the process of  
68 struggling with adversity that propel an individual to a higher level of functioning than that which  
69 existed prior to the event (Linley & Joseph, 2004). Howells and Fletcher (2015) recently argued  
70 that sport performers who compete at the highest level typically experience adversities and  
71 potential for growth during their careers (cf. Sarkar, Fletcher, & Brown, 2015; Tamminen, Holt,  
72 & Neely, 2013). Elite athletes encounter a range of stressors originating from personal,  
73 organizational, and competitive sources (Fletcher, Hanton, & Mellalieu, 2006; Sarkar & Fletcher,  
74 2014) and it is an athlete's subjective evaluation or appraisal of such demands that determines  
75 their severity (Lazarus, 1966, 1999). As Morris, Shakespeare-Finch, Rieck, and Newbury (2005)  
76 remarked, "the effect that an event has on the individual is ultimately subjective, as it is the

77 individual's perceptions that allow for the event to be comprehended as traumatic" (p. 576). For  
78 elite athletes, who typically have high levels of athletic identity, stressors that have the potential  
79 to disrupt self-identity schema are often appraised as threatening due to heightened sensitivity (cf.  
80 Brewer, 1993; Brewer, Van Raalte, & Linder, 1993). As Brewer (1993) observed, a severely  
81 sprained ankle is more likely to be evaluated as a major life disruption by an individual with high  
82 athletic identity than by an individual with low athletic identity. Some of the most potentially  
83 traumatic adversities in sport include sexual harassment or abuse (Fasting, Brackenridge, &  
84 Walseth, 2002), depression (Mummery, 2005), emotional abuse or bullying (Stirling & Kerr,  
85 2008), eating disorders (Papathomas & Lavalley, 2010), and injury (Powell & Barber-Foss,  
86 2000).

87 Sport psychology researchers have explored the perceived benefits (Wadey, Evans,  
88 Evans, & Mitchell, 2011), PTG (Crawford, Gayman, & Tracey 2014; Day, 2013; Day & Wadey,  
89 2016; McDonough, Sabiston, & Ullrich-French, 2011; Sabiston, McDonough, & Crocker, 2007),  
90 and SRG (Galli & Reel, 2012a; Salim, Wadey, & Diss, 2015, in press; Wadey, Clark, Podlog, &  
91 McCullough, 2013) experienced by recreational and competitive participants. Pertinent to the  
92 present study is that several researchers have specifically studied the notion of adversarial growth  
93 in athletes competing at non-elite (Galli & Reel, 2012b) and elite (i.e., Howells & Fletcher, 2015;  
94 Sarkar, Fletcher, & Brown, 2015; Tamminen, Holt, & Neely, 2013) levels. In terms of the elite  
95 sport research, Tamminen et al. (2013) found that as some international female athletes sought  
96 and found meaning in their experiences of adversity, they identified opportunities for growth  
97 associated with social support and the role of sport in their lives. Following interviews with  
98 Olympic champions, Sarkar et al. (2015) reported that the adversity-related experiences of  
99 trauma, motivation, and learning appear to play an important role in champions' psychological  
100 and performance development. In their study of adversarial growth in elite swimming, Howells  
101 and Fletcher (2015) found that Olympic champion swimmers who perceived their adversity-  
102 related experiences to be traumatic, initially adopted maladaptive coping strategies before seeking  
103 meaning in their experiences and turning to others for support. These strategies facilitated growth  
104 which was identifiable through superior performance, enhanced relationships, spiritual awareness,

105 and prosocial behavior. Collectively, the findings from these studies suggest that adversarial  
106 growth is a real and constructive phenomenon that occurs in athletes who compete at the highest  
107 level of sport (cf. Crawford et al., 2014; Day, 2013; Wadey et al., 2013).

108         Although the notion of adversarial growth has received growing support in the sport and  
109 broader psychology literature, some scholars have questioned the veridicality of growth  
110 experiences (e.g., Maercker & Zoellner; 2004; Park, 2004; Zoellner & Maercker, 2006a;  
111 Wortman, 2004). In 2004, Maercker and Zoellner were unconvinced by some accounts and  
112 evidence of PTG and suggested that self-deception was occurring in an attempt to convince  
113 oneself of positive outcomes. They termed this self-deception as *illusory growth* potentially  
114 associated with denial, avoidance, wishful thinking, self-consolidation, or palliation, and they  
115 proposed the Janus-faced model of self-perceived PTG (Maercker & Zoellner, 2004; Zoellner &  
116 Maercker, 2006a). This model recognizes and incorporates the constructive perspective of growth  
117 evident in other models of growth, such as the FDM of PTG (Tedeschi & Calhoun, 2004);  
118 however, what makes this model different from others is the inclusion of illusory growth.  
119 Drawing on Taylor and colleagues' (Taylor, 1983; Taylor & Armor, 1996; Taylor, Kemeny,  
120 Reed, Bower, & Gruenewald, 2000) research on adjustment to threatening events, Maercker and  
121 Zoellner (2004) argued that people often respond to threatening events with mildly distorted  
122 positive perceptions of themselves, exaggerated sense of personal control, and unrealistic  
123 optimism (see also Zoellner & Maercker, 2006a). As such, illusory growth is associated with  
124 cognitive avoidance strategies as part of a coping process which will likely, in the longer term,  
125 have deleterious effects on adjustment. If in the shorter term, however, illusory growth is  
126 accompanied by deliberate thinking about the trauma and active coping efforts, it may serve a  
127 palliative function. Evidence supporting a two-component model of growth has been reported in  
128 victims of stressful life events (McFarland & Alvaro, 2000), parents of children treated for  
129 leukaemia (Best, Streisand, Catania, & Kazak, 2001), cancer patients (Sumalla, Ochoa, & Blanco,  
130 2009; Widows, Jacobsen, Booth-Jones, & Fields, 2005), and motor vehicle accident survivors  
131 (Zoellner, Rabe, Karl, & Maercker, 2008, 2011).

132         Given the aforementioned theoretical and empirical advances in illusory growth, it is

133 surprising that no sport psychology researchers have explicitly focused on or provided  
134 empirical data relating to its occurrence in athletes. Some have questioned whether growth  
135 actually occurs (Wadey et al., 2013) and acknowledged the possibility of the illusion of growth as  
136 a coping strategy (Tamminen et al., 2013), and Howells and Fletcher (2015) concluded their  
137 recent study in this area with an oblique reference to the potential for illusory growth: “The  
138 Olympic champion swimmers studied in [our] research ultimately thrived in the face of adversity  
139 by adopting transitional-related strategies that helped them not only overcome their experiences  
140 but also, *they believed* [italics added], flourish as both sport performers and human beings” (p.  
141 46). In the present study, we extend Howells and Fletcher’s research by adopting a critical stance  
142 on the veridicality of growth and by exploring Olympic swimmers’ experiences of constructive  
143 *and* illusory growth during their lives. Such an approach offers a more complete theoretical  
144 understanding of, and empirical insight into, sport performers’ experiences of adversarial growth  
145 across their lifespan.

## 146 **Methods**

### 147 **Design**

148 The self-deceptive nature of illusory growth presents a significant challenge for  
149 researchers in this area because study participants are – by definition – unable to ascertain illusory  
150 growth when it is occurring, and typically for some time afterwards. As Joseph et al. (2012)  
151 remarked, “it may be that perceptions of growth are at times illusory. . . . As such, researchers  
152 need to be wary of taking reports of growth at face value” (p. 319). Consequently, others are  
153 typically required to infer that self-reported growth may be deceptive. In this study, we  
154 interpreted illusory growth via the identification of indicators of illusory growth (e.g., optimism;  
155 Zoellner et al., 2008, 2011) and of an absence of constructive growth (e.g., absence of action;  
156 Hobfoll et al., 2007) when a participant had claimed to have grown from adversity. Across both  
157 of these approaches, we engaged the double hermeneutic involving we, the researchers,  
158 interpreting the participants’ interpretations of their own experiences (cf. Giddens, 1984; Mottier,  
159 2005).

160 Given the salience of others’ interpretations in the identification of illusory growth, this

161 study's design was guided by the principles of interpretative phenomenological analysis (IPA)  
162 which is a qualitative methodology that involves investigating the sense that individuals make of  
163 their experiences through a process of engaging with their reflections (Smith, Flowers, & Larkin,  
164 2009). It is useful for better understanding psychosocial processes, particularly as they unfold  
165 over time (Brocki & Wearden, 2006). Thus, IPA was deemed an appropriate methodology to  
166 explore the sense making and personal meaning in individuals' self-reported growth (cf.  
167 McDonough et al., 2011; Tamminen et al., 2013) and an ideal method to interpret the occurrence  
168 of illusory growth.

### 169 **Researchers**

170 In their discussion about the principles of IPA, Larkin, Watts, and Clifton (2006)  
171 emphasized that "we *must* identify the researcher as an inclusive part of the world that they are  
172 describing" (p. 107). As the analysis involves researchers' interpretations of participants'  
173 interpretations of their reported experiences it is possible that the findings are incongruent with  
174 participants' accounts. Accordingly, it is important that researchers disclose their own  
175 background, values, and assumptions. Both authors have a background and an interest in the  
176 sport of swimming and, therefore, have an understanding of the competitive swimming  
177 community, nomenclature, and culture. Our epistemological stance can be described as  
178 constructivist in nature and seeks to understand people's constructions of their lived experiences.  
179 It is consistent with an ontological positioning that is in-between realist and relativist in "that  
180 while experience is always a product of interpretation and therefore constructed . . . it is  
181 nevertheless 'real' to the person" (Willig, 2009, p. 13).

### 182 **Participants**

183 A purposeful sampling procedure was adopted because IPA seeks to capture and represent  
184 idiographic phenomena (Smith et al., 2009). IPA is used with broadly homogenous groups  
185 (Brocki & Wearden, 2006) so inclusion criteria for participation in this study was that potential  
186 participants had competed in a swimming event at an Olympic Games and were, at the time of the  
187 data collection, over the age of 18 years. Following institutional ethical approval, potential  
188 participants were contacted via swimming coaches at a national swimming competition and

189 through private messaging on social media (i.e., Twitter). Although the coaches were known to  
190 both authors, they did not have professional relationships or friendships with either author. Three  
191 swimmers were approached at the competition with their coaches' approval and two agreed to  
192 take part, six swimmers were approached via social media and two agreed to take part.

193 In accordance with the idiographic nature of IPA, this study comprised a sample of four  
194 participants; a size that is typical of other IPA studies (e.g., Caron, Bloom, Johnston, & Sabiston,  
195 2013). Two of the swimmers were male, Jon and Tim, and two of the swimmers were female,  
196 Kate and Zoe (all names are pseudonyms), their ages ranged from 17-27 years at the time of their  
197 Olympic participation. All of the swimmers had competed in least one Olympic Games, Jon, Tim,  
198 and Kate had retired in 2004, 2008, and 2012 respectively, and at the time of data collection, Zoe  
199 was planning to retire in 2016. The swimmers all reported significant adversities which had  
200 occurred either prior to, or during their competitive swimming careers including, but not  
201 restricted to, illness, injury, coach conflict, relationship breakdown, and performance slumps. The  
202 differences in the swimmers' gender and dates of retirement allowed identification of  
203 convergence and divergence which may arise in the sample (Smith et al., 2009).

#### 204 **Data Collection**

205 Semi-structured interviews, complemented by timelining, lasting between 60 and 90  
206 minutes, were conducted by the first author. At the start of each interview, the participant was  
207 asked to draw and then annotate a timeline of their experiences with a particular emphasis on their  
208 "life highs and lows". Timelining, a form of graphic elicitation which records, extends, and  
209 deepens understanding of participants' past experiences, provided a temporal foundation for  
210 discussions that encouraged the participants' recall (Sheridan, Chamberlain, & Dupuis, 2011).  
211 The use of chronological accounts can provide a useful structure for interviews and facilitate "the  
212 process of entering the participant's world" (Smith et al., 2009, p. 82) which is an essential  
213 feature of IPA. Timelines were, therefore, valuable in this study for better understanding the  
214 relationships between adversities, trauma, and growth. The participants chose their own  
215 timeframe allowing them to focus on times when swimming and adversarial growth were salient  
216 in their lives. In addition to the timelining, the interviews were also informed by a schedule that



217 contained questions and probes relating to adversity- and growth-related experiences. The  
218 schedule acted as a guide for the interviewer and comprised four sections: introductory questions  
219 relating to the role of swimming in the participants' lives (e.g., "can you tell me what place  
220 swimming had in your life in the build-up to your first selection for the Olympic Games?"),  
221 questions relating to the participants' experiences of adversity (e.g., "can you tell me about any  
222 event or period in your life that you found particularly difficult?"), questions regarding the  
223 participants' responses to adversity (e.g., "how did you react to [adversity]?"), and questions  
224 relating to perceptions of change (e.g., "have your experiences changed you or your outlook?").  
225 Prompts and references back to the timeline were used to facilitate disclosure and discussion.  
226 Importantly, similar to the procedure adopted by McDonough et al. (2011), the interviewer  
227 avoided explicit terminology referring to growth per se (e.g., PTG, SRG) in an attempt to  
228 circumvent "a tyranny of positive thinking" (Lechner & Antoni, 2004, p. 39) whereby individuals  
229 experience sociocultural expectations to report positive outcomes of adversity. The interviews  
230 were recorded with audio equipment and then were manually transcribed by the first author.

### 231 **Data Analysis**

232         The data was analyzed on a case-by-case basis in accordance with Smith et al.'s (2009)  
233 IPA six step process. This process began with the first author immersing herself in the original  
234 data by listening to the interview recording, by scrutinizing the associated transcript, and by  
235 reviewing the timeline (step one: reading and re-reading). Initial notes were then recorded in  
236 respect of the descriptive, linguistic, and conceptual meanings of the participant's interpretations  
237 of his or her experiences and how these aligned with the timeline and associated annotations (step  
238 two: initial noting). In this study, this included noting the swimmer's descriptions of adversity-  
239 related experiences, his or her narrative style (e.g., the use of first, second, and third person), the  
240 location of the adversities on the timeline and how they were illustrated in comparison to other  
241 experiences, and the perceived impact of the adversities. The next step in the analysis involved  
242 the conversion of the initial notes into emergent themes (step three: developing emergent themes)  
243 which required the first author's interpretation of the swimmer's experiences. For example, some  
244 initial notes from step two related to the swimmer's search for meaning following adversity;

245 however, in the third step of the analysis it became apparent that some instances were about  
246 understanding why an event occurred whereas other instances involved appreciating the  
247 significance of an event in the swimmer's lives. (We interpreted the former as being indicative of  
248 illusory growth whereas the latter as being indicative of constructive growth).

249         The fourth step in the analysis involved using processes of abstraction to group similar  
250 themes and polarization to differentiate between distinct and opposing themes (step four:  
251 searching for connections across emergent themes). Similar themes relating to perceived positive  
252 changes integrated into a preexisting schema (labelled as *assimilation of a positive bias*) and  
253 expressions of hope for the future (labelled as *developing a positive outlook*) were grouped  
254 together in a theme representing swimmers' manipulating their thoughts and interpretations with a  
255 positive bias (labelled as *cognitive manipulations*). Opposing themes, such as perceived positive  
256 changes indicative of a shattered and reformed schema (labelled as *positive accommodation*) and  
257 a change in one's identity (labelled as *identity change*), were grouped together in a theme  
258 representing swimmers' reflections on their experiences and interpretations in a meaningful way  
259 (labelled as *cognitive processing*). The penultimate step of the analysis involved repeating the  
260 first four steps for each of the (three remaining) cases (step five: moving to the next case) and  
261 then, in the final step, using an iterative approach the cases were considered together to identify  
262 connections, patterns, and differences between the cases (step six: looking for patterns across  
263 cases). This analytical process was reviewed by the second author and interpretations, apparent  
264 inconsistencies, and alternative explanations were discussed. Any differences between the  
265 authors' interpretations were resolved through dialogue, and themes were refined and re-labelled  
266 accordingly.

### 267 **Research Quality**

268         To evaluate the quality of the research, Smith's (2011) guidance for evaluating IPA was  
269 applied to the research process and product. This study has a clear focus on Olympic swimmers'  
270 experiences of constructive and illusory growth during their lives. Multiple data collection  
271 methods, involving semi-structured interviews, timelines, and follow-up e-mail questions, were  
272 used to strengthen the quality of the data. The rigor of this research has, in part, been evidenced

273 by giving some indication of the prevalence for a theme and by providing extracts from at least  
274 half of the participants. Sufficient space has been given to reporting illusory and constructive  
275 growth to provide an in-depth and balanced portrayal of the participants' experiences. The results  
276 go beyond description and involve presenting an interpretative commentary with each extract to  
277 make sense of the participants and their experiences. An important aspect of this interpretative  
278 process was the analysis of what the participants disclosed (and did not disclose) elsewhere in the  
279 interview (cf. Smith 2004). This was significant for this study because to interpret illusory growth  
280 we not only identified indicators of illusory growth but also an absence of constructive growth  
281 when a participant had claimed to have grown from adversity. The analysis pointed to  
282 convergence and divergence both within and between participants in terms of the extent to which  
283 the participants provided evidence for the veridicality of their growth experiences. In presenting  
284 the results, we have attempted to craft a carefully written narrative that provides the reader with a  
285 critical insight into the phenomena of growth as experienced by Olympic swimmers.

286         An important aspect of qualitative research quality is the notion of trustworthiness of the  
287 data analysis procedures (Lincoln & Guba, 1985). A commonly used strategy to enhance  
288 trustworthiness is member-checking which is a "way of finding out whether the data analysis is  
289 congruent with the participants' experiences" (Curtin & Fossey, 2007, p. 92) and has been used  
290 previously in IPA studies in sport psychology research (e.g., Hassell, Sabiston, & Bloom, 2010;  
291 Levy, Polman, Nicholls, & Marchant, 2009). In this study, member-checking began with sending  
292 a copy of the interview transcript to each of the corresponding participants and inviting him or her  
293 to comment on the accuracy of the content (Smith et al., 2009). Further to this and in line with  
294 recommended member-checking procedures (cf. Carlson, 2010; Creswell, 2009; Kornbluh, 2015),  
295 a copy of the manuscript was later (i.e., after the analysis of the data and the authors'  
296 interpretation of the findings) sent to the participants inviting them to comment on whether the  
297 they understood the interpretations and content (e.g., Does this make sense to you?) and whether  
298 the narrative accurately reflected their own lived experiences (e.g., Do you think that the  
299 interpretations and content accurately reflected your own experiences?). To facilitate  
300 understanding, colloquial definitions of constructive growth (viz. one has positively benefited

301 from difficult experiences) and illusory growth (viz. deceiving oneself that one has positively  
302 benefited from difficult experiences) were provided. It was emphasised as part of the instructions  
303 that if the participants didn't understand anything or disagreed with anything, that they should  
304 seek clarification or express their concerns respectively. The manuscript was positively received  
305 by all four swimmers and there were no objections from any of the participants to either the  
306 interpretations or the content. Although some researchers have questioned the appropriateness of  
307 member-checking in qualitative interpretative research (see, e.g., Carlson, 2010; Larkin &  
308 Thompson, 2012) given the primacy of authors' interpretations (as opposed to participants'  
309 perspectives) in the research process, we deemed this procedure as a valuable and ethical part of  
310 enhancing trustworthiness in this particular study. Moreover, regardless of the aforementioned  
311 issues and procedures, the reader is encouraged to make their *own interpretations* – that is,  
312 engage a triple hermeneutic – of this research in relation to its trustworthiness (cf. Carlson, 2010;  
313 Creswell & Miller, 2000) and the nature of adversarial growth in sport performers (Joseph et al.,  
314 2012; Zoellner & Maercker, 2006a).

### 315 **Results**

316 The swimmers' experiences of growth were preceded by various adversities which were  
317 typically represented as lows or slumps on their timelines. The adversities included injury, illness,  
318 relationship difficulties, organizational stressors, and performance slumps and were  
319 contextualized within a performance narrative (cf. Douglas & Carless, 2006) involving a real or  
320 perceived threat to the swimmers' identities. The swimmers' initial response to adversity was  
321 typically characterized by denial. Despite the inherently negative aspects of adversity, it was  
322 evident from the swimmers' interpretations that following their initial response they also  
323 perceived positive consequences of their experiences. Analysis revealed that some of these  
324 positive outcomes were indicative of illusory aspects of growth, while other positive outcomes  
325 were more indicative of constructive aspects of growth. The growth process typically began with  
326 self-deception, more illusory aspects of growth, and fewer constructive aspects. As the temporal  
327 proximity from the adversity increased and the swimmers accepted their experiences they  
328 typically reported more constructive aspects of growth and fewer illusory aspects. Although the

329 themes are presented in a temporal fashion to portray this sequential process, it is important to  
330 note that the rate at which aspects of growth occurred varied both within and between the  
331 participants.

### 332 **Response to Adversity**

333 To protect themselves against the impact of negative emotions and distress, and to  
334 safeguard their identities as world-class athletes, the swimmers' initial response to adversity  
335 typically involved using denial as a short-term palliative coping strategy. Denial was  
336 characterized by a failure to acknowledge the impact of the adversity, suppression of the  
337 emotional consequences of the swimmers' experiences, an avoidance of reminders of the  
338 stressor[s], and a failure to disclose the details of the adversities to their social networks.  
339 Interestingly, although some of the swimmers explicitly recognized that they used denial, they  
340 still attempted to positively reinterpret their experiences by seeking out positive outcomes.

341 Jon explained that despite physically recovering from a life-threatening illness, he initially  
342 failed to acknowledge the impact that survival and recovery had on him. It was only when he met  
343 with a performance psychologist that he consciously recognized the enormity of his experience:  
344 "people had said it to me before but I didn't necessarily *feel* it". Tim was reflective about how he  
345 dealt with the consequences of a serious back injury and identified that denial was a strategy  
346 which allowed him to deal with the immediate aftermath:

347 There's a certain extent of . . . you reject it. And whether it's kind of alpha male  
348 machismo – 'I'll be fine' – sort of approach, which is inherently illogical, [or] whether  
349 it . . . pushes you through, I'm not quite sure.

350 We interpreted a reticence to elaborate about certain experiences as evidence of suppression of  
351 the emotional consequences of the swimmers' experiences. When asked to recall her feelings  
352 towards swimming following her poor performance at the World Championships, Zoe stated: "I  
353 don't know, I can't remember, I probably hated it". In an attempt to avoid discussing her six  
354 months abroad which she perceived as an adverse experience, she used the term "whatever" as a  
355 barrier to having to reflect on the experience: "I went out there and started in January 2009 . . .  
356 [and] had six months of doing whatever". In recalling the organizational stress that he endured

357 during his preparation for his first Olympic Games, Tim's intermittent tendency to use of the  
358 second person pronoun distanced his current self from his past experiences and was indicative of  
359 an avoidance of reminders of the stressors. This linguistic strategy created a distance from the  
360 authorizing subject of the first person with access to subjective experience: "*you* [emphasis added]  
361 don't think to question it because *you've* [emphasis added] never been to the Olympics before,  
362 because *you* [emphasis added] don't know what's required of an Olympic athlete".

363 Even when the swimmers had acknowledged the enormity or the impact of the adversities  
364 to themselves there was a reluctance to disclose these experiences to others. Tim explained that a  
365 lack of maturity and confidence meant that he was unable to disclose his perceived injustice in  
366 response to organizational stressors. To identify the positive aspect of this experience he created a  
367 counternarrative of how he could have dealt with the experience:

368 I would have gone to the person at the top of the tree and . . . said, 'I'm not going to do  
369 what you want me to do, because you don't know me, you don't know the way I need to  
370 perform and what I need to do to train'. And I know that now.

371 The reflections on failure to disclose or speak out was paralleled in Jon's experience of a  
372 catastrophic swim following an ill-advised attempt at motivational encouragement from an  
373 influential member of the organization prior his Olympic race. In contrast to his eloquence  
374 throughout the rest of the interview, we interpreted Jon's use of profanity as evidence of his  
375 continued depth of emotion and unresolved issues:

376 I knew I was already fucked and I was like, 'Oh my God'. And I finished the race and it  
377 was a poor swim and a poor time. I was devastated. I never said to anybody at the time; I  
378 never even told my coach this is what [he] said to me.

379 Kate recounted not having the confidence to speak out about her deteriorating coach-athlete  
380 relationship. Instead of confronting her perception of her coach's lack of support, she adopted an  
381 avoidance coping strategy which involved leaving her coach in favor of another with a different  
382 coaching philosophy. However, she perceived the composite experience of coach-athlete conflict  
383 and avoidance coping as a positive experience: "[It] was probably the hardest year for me . . . that  
384 was really tough. I have definitely learned a lot from that". In recalling her relationship with a

385 controlling boyfriend who exhibited little support for her Olympic aspirations, Zoe identified  
386 keeping her feelings to herself resulting in her having to cope with the experience alone:  
387 “sometimes I cried . . . I didn't like to express what was going on. So, most of the time I just kept  
388 it to myself and I just got through it somehow. But it was hard”. Denial as a defensive mechanism  
389 circumvented any cognitive processing of the event and delayed any constructive growth-related  
390 experiences. However, after a period of denial, the swimmers typically acknowledged the  
391 traumatic aspects of their adversities and progressed towards a conscious need to seek meaning in  
392 their experiences.

### 393 **Swimmers' Experiences of Illusory Growth**

394 Apparent in all of the swimmers' descriptions of their experiences were self-deceptive or  
395 illusory perceptions of growth. Following the use of denial, the swimmers sought meaning in their  
396 experiences through the use of cognitive manipulations and the derogation of adversity-related  
397 experiences. In a number of instances, the adversities were perceived to have been resolved  
398 despite a paucity of evidence of change at either a cognitive or a behavioral level; we interpreted  
399 this as indicative of illusory growth. This extract illustrates how, following a probe from the  
400 interviewer, Zoe was unable to articulate what she meant and understood when she claimed  
401 positive life changes following a period of adversity:

402 Interviewer: What do you mean when you say that you “grew as a person”?

403 Zoe: Um . . . I don't know. It's hard to explain. . . . I didn't have my parents, I had to rely  
404 on myself. Experiences were completely different; you know, the culture. People are  
405 completely different out there [in a foreign country] than they are here [in home country].  
406 Their sense of humor and things like that. Just having to figure things out for myself . . .

407 **Seeking meaning.** In response to intrusive ruminations, the swimmers began to  
408 acknowledge the distressing nature of their adversities. Zoe attempted to make sense of her  
409 adversities which was evidenced by multiple examples of questioning throughout her interview.  
410 Often, however, she was seeking meaning and answers that were not forthcoming; consequently,  
411 she shifted her search for an explanation from her own internal ruminations to direct questioning  
412 of the interviewer: “I was just thinking . . . what else can I do? I had had this dream vision of

413 getting a medal and then, all the hard work, I can't work any harder. Like what else could I have  
414 done?" Kate also questioned her poor performance although, similar to Tim, her use of the  
415 second person pronoun in the interview suggested an attempt to distance herself from the  
416 distressing memories and any intrusive ruminations about her performances: "and *you* [emphasis  
417 added] go to it [a major competition] and *you* [emphasis added] don't swim very well and it goes  
418 through *your* [emphasis added] mind, 'why has that happened?'" Following his Olympic Games  
419 experience, which was characterized by over-training and questionable decision-making by the  
420 performance management team, Jon searched for answers surrounding some aspects of the  
421 experience. This search for meaning included focusing on the ill-effects of an energy drink  
422 provided for the swimmers at an Olympic holding camp: "I've looked into it after the fact and . . .  
423 a controversial substance was in this sports drink and [that] if exposed to sunlight for long periods  
424 can have negative effects". Although it appears that Jon found an explanation for his illness at the  
425 camp, the search has resulted in no more than the comprehension of the experience. In explaining  
426 his poor swim at the Olympic Games, Jon questioned the intentions of the individual who  
427 provided him with poor advice: "I think with hindsight 'God damn it . . . what were you thinking,  
428 why did you say that?' . . . it definitely had an impact on that race". In this latter instance, and  
429 from details provided throughout the interview, it is apparent that in respect of this particular  
430 adversity the search for meaning in the organizational stressors he experienced continues for Jon.

431 **Cognitive manipulations.** In an attempt to regain some semblance of normality, two of  
432 the swimmers, Zoe who was still competing and Kate who had recently retired at the time of the  
433 data collection, manipulated their thoughts and interpretations which involved the assimilation of  
434 a positive bias and the development of a positive outlook. There was some evidence that Jon and  
435 Tim also engaged in such cognitive manipulations and motivated illusions, but not to the same  
436 extent.

437 We interpreted that Zoe and Kate assimilated their adversities into preexisting schema,  
438 typically in a positively biased way to protect their identities as their sense of control and self-  
439 esteem came under threat. Zoe's perceptions of her lack of control over her own life and her self-  
440 esteem were negatively affected during her experience of living and training abroad. She



441 described this period, during which she was over-trained and suffered depressive symptoms, as  
442 one when she felt “lost. I felt lost. I didn't know what I was going to do”. Yet, in contradiction,  
443 she reported what we interpreted as distorted positive perceptions of the experience and self-  
444 deception indicating assimilation rather than accommodation:

445           Competitive swimming over there [in America] is different and that was the good part.

446           And I grew as a person. But my swimming was getting worse and worse . . . [but] . . . I

447           can honestly say that if I hadn't have gone [there] I would probably have stopped.

448 Identification of growing as a person is incongruent with the description of her experiences as her  
449 swimming performance was in decline. Moreover, her use of “probably” and “honestly” in her  
450 quote further indicates the uncertainty that she felt about being abroad. We interpreted that her  
451 defensive distortion of the benefits of living abroad may have been driving her perceptions of  
452 growth. In order to protect her identity as a world-class swimmer, she attempted to re-establish  
453 that identity by moving back to her home country. This was characteristic of her behavior; when  
454 her identity was threatened, Zoe made “fresh starts” which restored her perceptions of personal  
455 control and stimulated (unrealistic) optimism and hope for the future: “I got a bronze medal at  
456 Commonwealth Games . . . but I could have done a lot better than I did. After that I decided to  
457 come home and . . . have a better chance of qualifying for the Olympics”.

458           Kate assimilated a positive bias in her reflections on having to retire as a result of her  
459 illness which had threatened her identity as a world-class athlete. She explained how “just”  
460 qualifying for the national team following her previous successes was a major shock to her beliefs  
461 about her identity and performance capabilities: “I'd made the Olympics final and got an Olympic  
462 medal. I've broken world records. I've medaled at every major championship. . . . I went to  
463 Commonwealth trials . . . only *just* to make the team, which was a massive shock. So, the only  
464 reason that I did carry on was because the [2012] Olympics were in London, to swim at the home  
465 Games”. Eventually time allowed Kate to prepare for the transition to retirement and to assimilate  
466 that knowledge in a positive way which gave her the illusion of having control and maintaining  
467 her fragile self-esteem: “I had known . . . it was going to be my last meet, and I prepared myself  
468 for it. It was sad to leave it all behind but . . . I was ready to do something different”.

469           The swimmers explicitly presented a positive outlook in terms of both their hopes for the  
470 future and in their manipulation of their environments; we interpreted that this was particularly  
471 the case for Zoe, who was still competing at the time of the data collection and, as a consequence,  
472 was vulnerable to future disappointment in the performance domain. She explained that in the  
473 future she hoped to be: “enjoying myself and I have these goals for the next 3 years and putting  
474 100% into that . . . being happy with myself and giving it my best shot”. In an attempt to buffer  
475 the impact of the adversities and possibly protect themselves from future setbacks, the swimmers  
476 attempted to create a positive environment in which they could restore the positive assessments of  
477 self, perceptions of personal control, and optimism for the future. Kate explained that she: “take[s]  
478 the positives out of everything. . . . I never surround myself by negative people, I always surround  
479 myself with positive people”. On reflection, Tim recognized his unrealistic optimism following an  
480 adversity but rationalized his belief in the context of the elite environment: “As an elite athlete  
481 your primary instinct is to compete at that level and believe instinctively that you can achieve  
482 what you want to achieve. If you don’t then there’s no point in doing it. . . . [Following a serious  
483 injury] I’d convinced myself that, despite my lack of fitness and health, I was still going to win.  
484 Now, thinking back, that’s illogical . . .” Jon had similar reflections about his response to his  
485 illness which comprised the retention of a positive outlook despite evidence to the contrary: “I  
486 was holding onto the dream of still making the [2000] Olympics [in Sydney] . . . when in actual  
487 fact I probably shouldn’t have”. The latter two quotes highlight the unrealistic optimism that is  
488 characteristic of illusory growth that Jon and Tim experienced in the aftermath of their adversities.  
489 However, the quotes also serve to illustrate enlightened retrospection that both swimmers were  
490 able to undergo following a period of time.

491           **Derogation of adversity-related experiences.** In addition to the cognitive manipulations,  
492 the swimmers also belittled their situation and attributes to maintain their self-esteem. They did  
493 this, firstly, by comparing their situation to others who they perceived as worse off than them and,  
494 secondly, by comparing their current attributes about the adversity to those they made in the past.  
495 We interpreted these social and temporal comparison strategies as comprising illusions that  
496 involved derogation of adversity-related experiences. In making sense of their experiences,

497 several of the swimmers engaged in social comparison with others and identified that in  
498 comparison to others' experiences their experiences were not *that* traumatic. We interpreted that  
499 this allowed the swimmers to bolster, or at least maintain, their self-esteem. In reflecting on her  
500 performance slumps, Kate compared her experiences with other undefined individuals: "it's the  
501 worst feeling ever and you think at the time that it's the end of the world. I now look back and  
502 think, 'well it wasn't so bad – worse things in life can happen than not compete very well'". She  
503 reflected on the opportunity to do charity work in Africa and how it allowed her to put her  
504 performance slumps into perspective: "there are so many other things in life [than swimming], I  
505 think I've realized that what could have happened, could have been so much worse. You don't  
506 realize it at the time".

507         On occasions the swimmers' perceptions of growth were attributable to temporal aspects  
508 and the depreciation of the impact of their negative experiences giving the illusion of positive  
509 change. When Zoe was asked about the amusement that she displayed, inferred by laughter, when  
510 describing her reaction to a significant injury some years previously, she claimed that her initial  
511 negative emotions were "silly". She explained that although at the time the consequences of the  
512 injury were devastating for her, it did not adversely impact on her swimming career and, therefore,  
513 its relevance in respect of her identity and beliefs about her current self were diminished: "I'm  
514 trying to remember looking back how upset I was. Obviously I didn't know what was to come  
515 and now I know that it was silly getting upset about it; it wasn't a big deal". This strategy was  
516 repeated in looking back on a controlling relationship, yet on this occasion not only did she  
517 explicitly identify that her response to experience was inappropriate but also that it had positive  
518 outcomes: "I was under the love spell where you don't realize what's going on. I think now it was  
519 so silly, but I think you have to go through these things and these phases. I think it probably  
520 made me stronger". Kate engaged in temporal comparison with her current self to counter the  
521 extreme emotion associated with retirement that she had described as "harder than I ever thought  
522 it would be [but] it was an exciting change because, you know, I'd never experienced it before,  
523 and, you know, you really realize that swimming wasn't that hard!"

524 **Acceptance of Adversity**

525           After denial and self-deception, the swimmers began to disclose aspects of their  
526 adversities and seek support from the people around them. This social support came from three  
527 distinct sources: a sport psychologist, family members, and coaches. Three of the participants  
528 confided in an individual with sport psychology expertise to help them to negotiate their  
529 adversities. Tim reflected on his continuing engagement with a sport psychologist: “I’m still in  
530 touch with this person today, very, very sporadically. They reached out . . . and we went through  
531 a process and came out the other side” and Zoe explained that she has remained in contact with a  
532 sport psychologist for nine years: “I speak to him quite a lot”. Jon recalled that when he spoke to  
533 a sport psychologist outside of his social network following his life threatening illness it allowed  
534 him to deal with the experience. The absence of emotional attachment gave Jon the opportunity to  
535 disclose:

536           There was going to be no ramifications socially to telling this psychologist how I was  
537 thinking and feeling. It allowed me to actually open up, pretty much cry. . . . And as soon  
538 as she said, ‘you’ve been through something terrible,’ it dawned on me that I had.  
539 For Jon, his relationship with this individual was significant and had implications both in respect  
540 of his enhanced performance and his psychological wellbeing:

541           I would never have got into the Olympic Games or become the swimmer I was . . . if it  
542 weren’t for the significant changes I made and significant learnings and growth that I  
543 went through as a consequence of my meeting with [a sport psychologist].

544           Family members were identified as critical in the swimmers’ lives, not just in respect of  
545 the adversities that they experienced, but also in the knowledge that family would be there for  
546 them if and when they were needed. Tim described the level of support that his parents provided:  
547 “I owe absolutely everything . . . to what my parents did. Unquestionable, often illogical,  
548 ridiculous amounts of support coming . . . from them”. Zoe explained that: “I talk to people I am  
549 close with . . . who understand, and we do things away from swimming”. Kate stated that: “I’ve  
550 got a great family that have always supported me”.

551           Although their relationships with their coaches were a source of conflict for Kate and Zoe,  
552 Tim provided a different perspective on his relationship with his long-term coach: “we fought like

553 cat and dog. . . . Any disagreement there was was purely performance related or training  
554 related . . . I had a very, very strong relationship [with him], but it is very hard to define”. He  
555 went on to explain: “If I ever got into serious trouble, for whatever reason it was, whether it was  
556 financial or whether I needed help with someone, he’d be the first person I’d pick up the phone  
557 to.” The linguistic strategies employed in this description of his relationship with his coach are  
558 interesting; the implication being that the coach-athlete relationship is strong and supportive, yet  
559 the tense used is future, suggesting that the opportunity for support is still there if required or,  
560 alternatively, that the opportunity for support was there but that it was not acted upon.

### 561 **Swimmers’ Experiences of Constructive Growth**

562 Apparent in some of the swimmers’ descriptions of their experiences were constructive  
563 perceptions of growth. Despite experiencing enduring distress, Jon and Tim, whose retirements  
564 from competitive swimming were in 2004 and 2008 respectively, found meaning in their  
565 experiences, engaged in more meaningful cognitive processing, experienced a change in life  
566 philosophy, and exhibited behavioral actions indicative of constructive growth. For Kate, who  
567 retired in 2012, the analysis revealed some aspects of constructive growth, while Zoe, who was  
568 still competing at the time of data collection, provided the least evidence to support this  
569 superordinate theme. Hence, it appears that the passing of time and possibly retirement from  
570 sport, and associated distancing from events and broadening of experiences, can facilitate the  
571 realization of constructive growth.

572 **Enduring distress.** Distress was evident in all of the swimmers’ accounts of their  
573 experiences. For example, after a disappointment at the World Championships, Zoe experienced  
574 considerable anguish: “I got really depressed, I couldn’t sleep and was crying a lot”. However,  
575 what distinguished constructive growth from illusory growth in the swimmers was the *ongoing*  
576 nature of this distress. More specifically, the absence of distress was interpreted as a self-  
577 deceptive optimistic bias whereas the enduring presence of distress was interpreted as a form of  
578 acknowledging the adversity and the impact it had. Constructive growth involves making genuine  
579 changes as part of a disruptive and distressing process. Tim and Jon, in particular, experienced  
580 ongoing and enduring distress, although both swimmers acknowledged that there were periods of

581 relief. Tim used metaphors such as a ‘rollercoaster’ and annotations on his timeline to explain his  
582 journey from adversity to growth:

583           It was a hellish slog that was blood, sweat, guts, tears. . . . the road to the Olympics had  
584           some of the highest highs and lowest lows and, in short, was an emotional rollercoaster –  
585           one which caused considerable anguish and heightened emotions.

586 In contrast to the eloquence used to articulate his experiences of injury and illness, the enduring  
587 distress that Jon experienced as a result of organizational stressors was apparent in his use of the  
588 profane when he described the interference of a performance director in his race preparation: “I  
589 was fucking so pissed off with hindsight about that. It was the wrong choice for [him] to step in  
590 and say that to me, literally minutes before my race”.

591           **Finding meaning.** Although seeking the meaning of the adversities was apparent in all of  
592 the swimmers, constructive growth was identifiable when the swimmers were able to progress to  
593 finding meaning, a process that often takes time. Tim acknowledged that the process of finding  
594 meaning in his back injury and the organizational stressors that he had experienced was  
595 unpleasant and took time: “[It] was a horrible process, a very slow process as well”. Jon stressed  
596 the importance of identifying the right time to address the emotional aspects of his illness, and  
597 that it was important for him to resolve the physical aspects of his illness first. The focus on the  
598 physical allowed Jon the opportunity to postpone addressing the fundamental threats to his  
599 identity and wellbeing: “I think I had to be physically better before I could . . . stop and think  
600 about it, ‘what have you just been through?’” The focus of this process went beyond the  
601 comprehensibility of the adversities to appreciating the significance of an event in the swimmers’  
602 lives. For Jon, it was engagement with his sport psychologist that allowed him to acknowledge  
603 and make sense of what had happened:

604           For the clavicle fracture, [working with a sport psychologist] was about removing the  
605           gremlins that were blocking me from full, relaxed, optimal, sports performance. . . . From  
606           a psychological perspective, the illness recovery was more about . . . emotional cleansing  
607           and psychological cleansing: ‘God I’ve been through something ridiculous here,  
608           something enormous’. I just needed to acknowledge that to myself with someone before I

609 could move on.

610 **Cognitive processing.** The two male swimmers cognitively processed their experiences  
611 involving a change to their identities and the positive accommodation of their adversities (as  
612 opposed to assimilation into preexisting schema). This involved a more fundamental  
613 transformation in the swimmers than the cognitive manipulations and motivated illusions  
614 associated with illusory aspects of growth. Jon acknowledged a number of identity changes that  
615 were evidenced through recognition of his different selves: “I picture my relationship with my  
616 past self, my Olympic self, and the Olympics as sort of like a mentoring voice that questions you  
617 at the same time”. Tim identified that as an outcome of his adversities he experienced a change in  
618 how he approached life: “I’ve become a more pragmatic person, rather than somebody who is  
619 emotional and maybe a bit of a romantic about the sport and didn’t temper that with just level-  
620 headedness”.

621 Descriptions that referred to events that suggested a shattering and reforming of schema  
622 were interpreted as indicative of positive accommodation. Jon described a restructuring of his  
623 beliefs about his illness and his first clavicle injury. He described the depth of mental processing  
624 and reflective pondering that he engaged in with his sport psychologist, which not only allowed  
625 him to focus on the active mastery of his skills but also his perceptions of growth:

626 It was a sense of starting again, [but] it wasn’t a sense of ‘right everything’s fine now’; it  
627 was a . . . moment of feeling cleansed . . . being re-born. And then it was about re-growth.  
628 I still had to go back to my training . . . and start again to become better as a swimmer. . . .  
629 but the tools that [the psychologist] had given me . . . [to] break it down physically,  
630 mentally, and technically . . . allow[ed] me to grow.

631 **Philosophical change.** Philosophical change involved a greater appreciation of life, a  
632 change in perspective, increased spirituality, and enhanced relationships. In discussing his life-  
633 threatening illness which resulted in non-qualification for the 2000 Olympic Games, Jon  
634 explained: “I’m really glad that I was close to death because it’s made me appreciate my life so  
635 much more, in everything that I do”. He also explained that being ill amplified the importance of  
636 swimming and his Olympic goal:

637 I suddenly valued what it was that I had, more than I had before, and it's perhaps not until  
638 someone has taken something from you or threatened to take it from you . . . that it gets  
639 magnified how much you want it and it gets focused.

640 Following retirement, Jon no longer had to conform to the performance narrative and this allowed  
641 him to appreciate the luxuries that he sacrificed as a result of his swimming career: "I like that I  
642 can now have a glass of wine and a nice meal and not worry about the calorific damage to my  
643 sports performance. . . . I used to have to sacrifice that". Tim explained a change in perspective  
644 following adversity:

645 I then had a mentality shift in my whole career. . . . When you have a performance or an  
646 injury that knocks you for six. . . . Your mentality needs to take on a slightly different  
647 tangent, in that it needs to become more logical.

648 Of the participants, only Jon explicitly identified an increase in spirituality but his  
649 description was significant in that it indicated a fundamental philosophical change. He referred to  
650 the illness experience as a "rebirth" which we interpreted as being integral to his growth  
651 experience. He further stated: "an openness to be spiritual has always sort of been with me, but it  
652 was definitely greater after this. I think that near death experience and the re-born, or re-birthing  
653 experience, heightened it". The swimmers identified enhanced relationships as a result of their  
654 adversities but this only came after a period of time when they had had the opportunity to reflect  
655 on their past experiences. For Jon, spirituality was demonstrated in the way he now perceives his  
656 family: "I find the spiritual lifeline in nature, in the world, in my own existence in life, and in  
657 friends and family". Kate explained that: "it wasn't until I retired that [I] realized . . . that there is  
658 more to life than . . . being a swimmer, and your family . . . are the most important people in your  
659 life". In discussing his performance slumps, Tim identified that it was then, "that family bonds  
660 become strongest".

661 **Behavioral actions.** There was some evidence of the swimmers' behaviors and actions  
662 changing as a result of their adversities and involved them speaking out and engaging in  
663 philanthropic work. Although the initial response to adversity was a reticence to disclose,  
664 following cognitive processing and the enlistment of social support, the swimmers recognized



665 that concealment of their adversities was not an adaptive strategy and they could articulate their  
666 thoughts. Kate explained: “I definitely learned . . . that I could speak my mind a lot more. . . .  
667 because I found that if you let things fester, it gradually gets worse and worse and worse”. She  
668 interpreted that her charity work in Africa was only possible because she had retired and that  
669 engagement in philanthropic work was a necessary part of her growth experiences. We further  
670 interpreted that this demonstrated her openness to new experiences: “I’ve never felt like I did  
671 when I was out there. . . . It was once-in-a-lifetime opportunity. . . . It does make you feel better  
672 about yourself that you give something back”. Jon reflected on a desire to give something back to  
673 swimming and explained the work that that his aquatic business has engaged in to improve the  
674 lives of future generations: “If I were to advise youngsters . . . helping people improve and get  
675 better, for me it’s how you can have a happier sporting life, aside from a better performance  
676 sporting life”.

#### 677 **Discussion**

678 Using IPA of interviews and timelines, we extended Howells and Fletcher’s (2015) study  
679 of adversarial growth in Olympic swimmers by exploring experiences of constructive *and* illusory  
680 growth. Consistent with the findings of previous research in elite sport (e.g., Howells & Fletcher,  
681 2015, Sarkar et al., in press; Tamminen et al., 2013), we found perceived positive consequences  
682 of adversarial-related experiences; however, in contrast to this research, we found that some of  
683 these positive outcomes were indicative of illusory aspects of growth whereas others were more  
684 indicative of constructive growth. This finding is consistent with theoretical (cf. Maercker &  
685 Zoellner, 2004; Zoellner & Maercker, 2006a) and empirical (e.g., McFarland & Alvaro, 2000;  
686 Sumalla, Ochoa, & Blanco, 2009) advances in the broader psychology and trauma literature. The  
687 identification of both illusory and constructive growth in this study does not imply that reports of  
688 growth are mutually exclusive, rather that aspects of both may temporally fluctuate or even co-  
689 exist. In line with the proposals of the Janus-faced model of self-perceived PTG (Maercker &  
690 Zoellner, 2004; Zoellner & Maercker, 2006a), our findings suggest that the earlier phases of the  
691 growth process were characterized by more illusory aspects of growth and fewer constructive  
692 aspects of growth in all of the swimmers. As time passed, two of the swimmers (who had retired

693 some time prior to the interviews) displayed more constructive and fewer illusory aspects, whilst  
694 the other two swimmers (one of whom had recently retired and the other who was still competing  
695 at the time of the interview) continued to display more indicators of illusory growth. This finding  
696 in part supports Zoellner and Maercker's (2006b) observation that "with growing coping success,  
697 the illusory side loses importance over time and the constructive side gains impact over time" (p.  
698 349). Interestingly, it appears that retirement may play an important role in the evolution of  
699 growth experiences due to the associated distancing from events and broadening of experiences  
700 which may facilitate constructive growth (cf. Coakley, 1983).

701 As noted above, illusory and constructive growth both involve perceived positive  
702 consequences of adversarial-related experiences. Prior to growth occurring, however, all of the  
703 participants used denial as a short-term palliative coping strategy. This adaptive aspect of denial  
704 is important to highlight because denial is often reported as a maladaptive response to stressful  
705 events (Ivarsson, Johnson, & Podlog, 2013; Wadsworth, 2015). However, in line with Maercker  
706 and Zoellner's (2004; Zoellner & Maercker, 2006a) theorizing, denial if accompanied by  
707 deliberate thinking about the trauma and active coping efforts may serve a palliative function.  
708 Following denial, our findings suggest that different aspects or indicators of growth became  
709 apparent, suggesting that growth is multidimensional in nature (cf. Morris et al., 2005). It also  
710 appears that that temporality is significant in that those who exhibit constructive growth  
711 experience some aspects of illusory growth in the past.

712 Illusory growth involved the search for meaning following adversity and the posing of  
713 questions akin to "why me?" and "why did it happen?" The purpose of these deliberate  
714 reflections is to comprehend and understand why an event occurred. This finding supports tenets  
715 of several of the growth-related models and theories that the search for meaning is part of the  
716 growth process (Tedeschi & Calhoun, 1995; Joseph & Linley, 2005) but our findings suggest that  
717 if this search (regardless of outcome) focuses solely on comprehension (rather than significance)  
718 then the growth remains illusory (cf. Park, 2010). Other aspects characteristic of illusory growth  
719 were cognitive manipulations and the derogation of adversity-related experiences. Throughout the  
720 experience of illusory growth the swimmers used palliative coping strategies that were typically

721 emotion-focused in nature. These strategies have been referred to in the growth literature as self-  
722 enhancement cognitions (Maercker & Zoellner, 2004) and were employed by the swimmers to  
723 reduce distress and to defend or maintain aspects of their identities. The swimmers' use of  
724 optimistic language about some aspects of their experiences is consistent with Zoellner et al.'s  
725 (2008) finding that optimism is often a proxy for illusory growth. Regardless of how realistic this  
726 optimism was, illusory growth was also characterized by unconvincing claims to have grown that  
727 were not accompanied by consistency of accounts and evidence of transformational change. It has  
728 been argued that such claims represent defensive distortions (Wortman, 2004) in an attempt to  
729 defend an identity (Sumalla et al., 2009), as opposed to identity transformation. Although self-  
730 deception has the potential to have a deleterious impact on an individual, we are not suggesting  
731 that illusory growth is negative per se. Rather illusions and self-deceptions can (and do) serve a  
732 positive psychological and performance development function (cf. Alicke & Sedikides, 2009;  
733 Taylor, 1983). Indeed, several decades ago, Taylor (1983) discussed "illusion as essential to  
734 normal cognitive functioning" (p. 1167) and concluded that "the effective individual in the face of  
735 threat, then, seems to be one who permits the development of illusions, nurtures those illusions,  
736 and is ultimately restored by those illusions" (p. 1168).

737         Constructive growth was characterized by veridical transformational changes in the  
738 swimmers' lives that went beyond motivated illusions, wishful thinking, and defensive  
739 distortions. One aspect of constructive growth was the swimmers' enduring distress. Although it  
740 may appear counterintuitive to suggest that ongoing anguish is indicative of transformational  
741 change, our findings suggest that enduring distress represents an acknowledgement of the  
742 adversity and the impact it had, as opposed to an absence of distress which represents a self-  
743 deceptive optimistic bias characteristic of illusory growth (cf. Taku, Calhoun, Cann, & Tedeschi,  
744 2008; Tedeschi & Calhoun, 2004). Although denial was an initial response to adversity, it was the  
745 disclosure of adversity-related experiences and the seeking of social support that was a facilitator  
746 of constructive growth (cf. Prati & Pietrantonio, 2009; Tamminen et al., 2013). Although meaning  
747 and comprehension were often sought as part of the growth process (as an aspect of illusory  
748 growth e.g., Jon's failure to find meaning in his organizational stressors), it was the finding of

749 meaning and appreciation of the significance of an event that was indicative of constructive  
750 growth (cf. Day, 2013; Park, 2010) for example, Jon's appreciation of the significance of his near  
751 death experience on his life. However, perhaps the main differentiators between illusory and  
752 constructive growth were the manipulation versus the processing of cognitions, and the associated  
753 integration into a preexisting schema (i.e., assimilation) versus the shattered and reformation of  
754 schema (i.e., accommodation) (cf. Howells & Fletcher, 2015; Payne, Joseph, & Tudway, 2007).  
755 Further, in addition to various indices of philosophical change (Galli & Reel, 2012a; Tedeschi &  
756 Calhoun, 1996), we also found that meaningful behaviors and actions appear to distinguish  
757 between illusory and constructive growth (cf. Hobfoll et al., 2007; Shakespeare-Finch &  
758 Barrington, 2012).

759         In their critical evaluation of the use of IPA in psychology research, Brocki and Wearden  
760 (2006) highlighted the importance of acknowledging the limits of the representational nature of  
761 the data. A limiting aspect of the data in our study is that it is restricted to retrospective self-  
762 reports of growth that may conform to a cultural script present in elite swimming; that is,  
763 exaggerated expressions of positive behaviors in response to adversity. To partially circumvent  
764 this issue and to strengthen assertions of illusory growth, growth researchers should consider  
765 obtaining corroboratory evidence from social networks (Wortman, 2004), such as family, friends,  
766 partners, coaches (see, e.g., Wadey et al., 2013), and support staff, who may be in a position to  
767 provide further insight into adversarial growth. Furthermore, during the interviews for this study,  
768 several of the participants alluded to the impact that their experiences had on significant others.  
769 With the exception of Day and colleagues' studies of the impact of witnessing a traumatic injury  
770 of an athlete (Day, Bond, & Smith, 2013; Day & Schubert, 2012), there is no research exploring  
771 vicarious growth (Linley et al., 2003) in the sport domain. Regardless of the specific research  
772 question investigated, sport psychology researchers should consider multidimensional and  
773 temporal aspects of both constructive and illusory growth (cf. Morris et al., 2005), together with  
774 using other research methods such as case study analysis (see, e.g., Vilenica, Shakespeare-Finch,  
775 & Obst, 2013) and quantitative inventories and surveys (see, e.g., Tedeschi & Calhoun, 1996).  
776 Although many questions remain, the study of adversarial growth in elite sport is gaining

777 momentum and the emerging findings have important theoretical and practical implications for  
778 the field of sport psychology.

779

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