CHAPTER 5

Performance Psychology in the Performing Arts

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Abstract

In this chapter, a wide range of performance psychology–related topics are considered in relation to the performing arts. Existing research with musicians, dancers and, to a smaller extent, actors is reviewed and contrasted with sport research within a tripartite structure. In the first section, Exploring Convergence, topics with largely similar research results to sport are considered. These include expertise, talent, and deliberate practice; motivation; flow; perfectionism; disordered eating; and injury and pain. In the second section, Exploring Divergence, topics that have been tackled differently in the performing arts and sports are considered. These include psychological skills; personality; anxiety, stress, and coping; and self-confidence and self-esteem. In a third and final section, Exploring Novelty, topics that appear promising for an emerging psychology of performing arts, yet which have less precedent in sport research, are outlined. These comprise creativity and inspiration; memorization; emotional expression; and audience research.

Key Words: Dance, music, theater, acting, performing arts, artistry, psychology

Why Performance Psychology in the Performing Arts?

The central theme of this Handbook is that the psychology of human performance can be studied across multiple domains, not just sport and exercise, and this chapter examines the research base that exists in another performance area: the performing arts. It would be overambitious, perhaps impossible, to do justice to the enormous variety of psychology topics that have potential implications for the performing arts; as such, this chapter focuses on research based in performance psychology, putting the performance of performing artists, suitably, at center stage. Within the limitations of my own training and expertise, I also make links to other areas where I have found them especially appropriate. A key issue addressed in the chapter is whether the approaches and techniques of sport psychology can be successfully used in the domains of dance, music, and theater. In the last decade, a few papers (e.g., Hays, 2002), a couple of book chapters (Hanrahan, 2005; Hays, 2005), and one book (Hays & Brown, 2004) have been written on the topic of applying sport psychology to performing arts. As will become apparent, my conclusion is that, in some areas, sport psychology approaches dovetail well with the psychology of performing arts; in other areas, much work remains to be done; and in some key areas, the issues that arise are different, perhaps unique to each field.

The application of performance psychology to the performing arts makes sense, simply because performing well lies at the heart of both sports and artistic activities. At the same time, it is perhaps the definition of what constitutes “good performance” that has kept the areas largely separated. What, exactly, does successful performing entail? Differences commonly highlighted include competition, the
The notion of performing in a context not directly set up as a comparison between performers (i.e., competitions) is frequently mentioned as a key difference between performing arts and sports. However, there is growing recognition that the performing arts often are competitive, for instance in selection to schools, auditioning for jobs, casting for roles, and even getting attention from teachers (e.g., Hays, 2002; Hays & Brown, 2004; Kogan, 2002; Robson, 2004). Gardner (1993) argued that because of the difficulties of getting any recognition for one's efforts and of making a living in the arts, artists constantly compete for recognition in the social and cultural arena. Some performing artists also do compete: The rise of TV shows such as X-factor, American Idol, and their ilk is striking; competition is the default mode of performance for freestyle disco and ballroom dancers; and there are many competitions in art forms such as classical music and ballet, such as the Prix de Lausanne for young elite ballet dancers.

A second distinction often drawn between arts and sports is that of artistry, and several studies reviewed in this chapter testify to the importance of this factor in research. Still, not all who take part in the performing arts do so for artistic purposes (e.g., some dance simply because they enjoy moving to music), whereas aesthetic athletes, such as gymnasts and figure skaters, perform to music and get scored on artistic merit. Finally, it is notable that sports and arts are all frequently performed in front of audiences. The characteristics of sport and arts audiences usually differ, however, and the third section of this chapter presents an exploration of audiences as a research area.

Although some differences exist between performing arts and sports, many more similarities than differences are apparent: Artists and athletes alike are passionate about what they do, develop talent through hard training, seek coaching for further development, often work in teams or ensembles, need to stay motivated, and encounter obstacles and try to tackle them. They try to avoid injury, and need to cope with injuries and pain when they do happen. For all these reasons and more, the performing arts can benefit from an increased understanding of the psychological aspects of performance.

Chapter Overview

Performance psychology holds great potential for understanding many aspects of the performing arts. As yet, however, only music and dance can be said to have anything resembling a psychological literature, and even these two areas have seen limited performance-related research when compared to sport. It is encouraging that some movement is being made toward a better understanding of actors' health (Seton, 2009) but perhaps a little sad that Seton is forced to conclude that little change has taken place since Alice Brandonbrener (founder of the Performing Arts Medicine Association) called actors “The Forgotten Patients” in a 1992 editorial, noting that, “Regarding the many areas of potential research in ‘theatrical medicine’ those in the psychological realm are particularly intriguing” (p. 101).

Publications in performing arts psychology sometimes have a different emphasis than those seen in sport psychology, and topics such as goal setting and self-talk have as yet seen no published papers in the performing arts domain. Much research to date has been problem focused (e.g., on anxiety and disordered eating), and less is known about performers’ strengths, such as positive goal striving and concentration. An exception is the literature into expertise and talent, which is where this review will begin. The chapter is organized into three sections, based on the extent to which research issues seem to have a common focus in performing arts and sports. Several topics have been studied in similar ways in both arts and sport and these are reviewed first (Exploring Convergence). Other topics have been studied slightly differently in the two domains; these are reviewed next (Exploring Divergence). The third and final section outlines research topics that appear to hold promise for the performing arts, yet are rarely researched in sport (Exploring Novelty). Some future research recommendations and applied implications are suggested throughout.

Exploring Convergence: Research Topics Pursued Similarly in Sport and Performing Arts

This section reviews topics in which researchers have undertaken somewhat similar investigations with athletes and performing artists. As such, sport models may transfer well to performing arts domains. The selected topics include expertise, talent, and deliberate practice; motivation; flow; perfectionism; disordered eating; and injury and pain.

Expertise, Talent, and Deliberate Practice

Talent, like creativity, is according to folk psychology something mysteriously bestowed on a lucky few (e.g., Howe, Davidson, & Sloboda, 1998;
Sloboda, 1996). Studies are gradually demonstrating the limitations of such a belief (e.g., Ericsson, Krampe, & Tesch-Römer, 1993; Howe et al., 1998; Kemp & Mills, 2002; Smith, 2005), yet a variety of domains including sport, music, and dance all appear to be holding the same debate as to whether nature or nurture is most important in the development of talent (see, e.g., the special issue in *Behavioral and Brain Sciences*, 1998, 21(3)). Although the strongest proponents of each argument may be debating for some time yet, it seems clear that talent is a multidimensional construct (e.g. Côté & Abernethy, 2012, Chapter 23, this volume; Csikszentmihalyi, 1998; Harwood, Douglas, & Minniti, Chapter 25, this volume; Howe et al., 1998; Kemp & Mills, 2002; Walker, Nordin-Bates, & Redding, 2010; Warburton, 2002) and that deliberate practice is crucial to the development of physical, technical and creative excellence (e.g., Csikszentmihalyi, 1996; Howe et al., 1998; Weisberg, 1998). It is also recognized that identifying talent is hard, that psychological aspects play a major part both in talent identification and development, and that nurture is crucial yet nature plays some part (e.g., Hays & Brown, 2004; Kemp & Mills, 2002; Walker et al., 2010; Warburton, 2002; Winner, 1996).

The influence of teachers in artistic talent development is recognized to be paramount (e.g., Csikszentmihalyi, Rathunde, & Whalen, 1993; Gembris & Davidson, 2002; Walker et al., 2010), and succeeding without family support is “possible but exceptional” (Gembris & Davidson, 2002, p. 23). In their landmark study, Csikszentmihalyi and colleagues (1993) examined, among other things, the family structure among youth talented in academics, sport, and the arts. It appeared that optimal talent development was associated with families balancing integration (e.g., support, stability) with differentiation (i.e., supporting independence, challenge). Termed complex families, this notion appears to have gained little research momentum and further investigation is encouraged (see also Harwood, Douglas, & Minniti, 2012, Chapter 25, this volume). Research by Manturzewska (1995, cited in Gembris & Davidson, 2002) into the characteristics of families that nurtured exceptional Polish musicians is also illuminating: The conclusion was that family background was the primary influence in developing a music career, and many of the factors identified match those appearing in recommendations from research into athlete motivational climates (e.g., encouragement and support, child-centered attitude, emphasis on process/enjoyment). Manturzewska also noted that parents of successful musicians managed to be highly involved, yet not overinvolved, which resembles findings with athletes (Carlsson, 1988; Côté, 1999). The achievement of this balance deserves further study in order to address the potential problems of what in the arts is called “stage parents” (see e.g., Hamilton, 1998) and, sometimes in American sports, “soccer moms” (Murphy, 1999).

It makes sense that parental support is important for all, but perhaps especially so in domains where training typically starts at a very early age (e.g., ballet) and where practicing long hours at home is seen as very important (e.g., violin). Accordingly, parental encouragement is crucial in getting young musicians to practice (Davidson, Howe, Moore, & Sloboda, 1996; Howe et al., 1998). The optimum amount of support likely depends on the age of the performer, however. Davidson et al. (1996) found that parental support for high-achieving musician children was high until age 11 and then dropped off in favor of intrinsic motivation and self-regulation. For lower achievers, the reverse was noted; this was interpreted as parents getting stricter in an attempt to “motivate” their children—albeit unsuccessfully. The interpersonal aspects of deliberate practice therefore seem crucial. Even being called “talented” can be either helpful (e.g., in promoting motivation and in boosting confidence; Van Rossum, 2001) or hurtful (e.g., by promoting an external locus of control; Walker & Nordin-Bates, 2010), suggesting that examination of the very term “talent” would be worthwhile. In fact, Smith (2005, p. 51) argued that “Musical talent is a vague concept of little practical value, and the role of education is to serve the musical development of every individual.”

The deliberate practice framework has been consistently supported in several fields (Bonneville-Roussy, Lavigne, & Vallerand, 2011; Chaffin & Imreh, 2001; Côté & Abernethy, 2012, Chapter 23, this volume; Ericsson, 1996; Gembris, 2006; Hallam, 2001; Lehmann & Gruber, 2006; Miksza, 2011; Nielsen, 1999; Sloboda, Davidson, Howe, & Moore, 1996; Ureña, 2004; Van Rossum, 2001). Ericsson et al. (1993) created the framework based on work in multiple domains, including music. Of particular interest here is the notion of enjoyment. In the original framework, activities were judged to be deliberate practice if they were specifically designed to improve performance (i.e., highly relevant to performance), required a great deal of physical and/or mental effort (concentration), and were not inherently enjoyable (Ericsson et al., 1993).
Sport researchers, however, have demonstrated that athletes often do enjoy their deliberate practice (e.g., Helsen, Starkes, & Hodges, 1998; Hodge & Deakin, 1998; Hodges & Starkes, 1996; Young & Salmela, 2002). It is possible that being alone makes a difference to the enjoyment felt. In many sports, athletes train together in groups and teams, and in most dance forms lessons are group-based even at the professional level (ballroom and Latin American being notable exceptions). In music, many practice in bands and orchestras, yet it is commonly accepted that one has to actually learn one’s instrument and become technically proficient through solo practice. So strong is this demand that many spend several hours each day practicing on their own, even at young ages. Says a young man in an interview study:

I started playing in bands at school and doing little gigs; it was really good fun. I made a lot of friends doing that, whereas the piano, it was always kind of by myself. With my bass I could play with others and that was always more fun. (Papageorgi et al., 2010, p. 170)

Papageorgi and her colleagues (2010) also found that, for their sample of university-level music students, solo practice was not seen as enjoyable now, nor had it been so in the past. As a result, parental support was especially important in getting them to practice. This raises the question of what constitutes healthy practice and healthy support. Research has demonstrated that enjoyment is an important component in nurturing adherence (Scanlan et al., 1993; Weiss & Amorose, 2008), and doing something for enjoyment is a key aspect of intrinsic motivation (Ryan & Deci, 2000). Moreover, as explained by Standage (2012, Chapter 12, this volume), intrinsic motivation is typically its most adaptive form. At what point does parental support and encouragement to practice turn into pressure, fostering extrinsic motivation? How can we make sure that, even if in itself extrinsic, parental encouragement to practice alone is a way of making possible the parts of music learning that the young person does enjoy? These are important questions to address—perhaps especially because young people’s perceptions of the support and pressure they are receiving can differ from what parents believe they are providing (Kanters, Bocarro, & Casper, 2008).

It is possible that motivation theories can help answer some of these questions. For instance, it would be valuable to examine the intrinsic motivation toward practice among young performing artists. Is it different between those practicing primarily alone versus in groups? If so, perhaps the lack of opportunity to develop positive peer relations during solo practice (e.g., Fredricks et al., 2002; Kamin, Richards, & Collins 2007; Patrick et al., 1999; van Rossum, 2001) and the consequent low sense of relatedness (Ryan & Deci, 2000) accounts for the observed difference?

Although deliberate practice is important, a criticism of the framework has been its emphasis on quantity over quality (e.g., Howe et al., 1998; Singer & Janelle 1999; Walker et al., 2010; Williamson & Valentine, 2002). The extent to which training constitutes deliberate practice likely depends on a range of factors, including the degree to which one is able to understand one’s teacher, pedagogic effectiveness, time spent on- and off-task during a session (e.g., waiting for one’s turn), and the quality of equipment (such as one’s instrument). Music researchers have made more progress than either dance or theater researchers in considering practice quality. For example, differences in approaches to practice have been found between more and less accomplished musicians (Chaffin & Imreh, 2001; Gruson, 1988; Nielsen, 1999) and between those performing better and worse in intervention studies (Mikszta, 2006, 2007, 2011). Professional string players appear to have greater self-awareness than novices (Hallam, 2001). Overall, then, musicians’ talent development depends on a combination of practice quality and quantity. Although that is hardly a revolutionary conclusion, it is interesting that no research appears to have considered what constitutes quality practice in either theater or dance. Is it the dancers who are able to transform group class into individually relevant, “true deliberate practice” who progress the most while those who “go through the motions” progress less?

Several theorists have recognized that the wider social environment also plays a major part in the practice behaviors and talent development of performing artists (e.g., Csikszentmihalyi et al., 1993; Hallam, 1997, 2002; McPherson & Zimmerman, 2002). These concepts have developed in parallel with talent models in sport (Gagné, 1995; Henriksen, Stambulova, & Roessler, 2010; Williams & Reilly, 2000) and education (e.g., Subotnik, Olszewski-Kubilius, & Arnold, 2003) yet appear similar in many ways. For instance, there is usually recognition that intrapersonal, interpersonal, and wider environmental factors all matter and all interact. Accordingly, a recent review reported that, for dance, a large number of both relatively stable
and more unstable factors interact in the development of talent (Walker et al., 2010). As Henriksen et al. (2010) note, the move toward a contextual approach is evident in several areas of contemporary literature, and they recommend looking to organizational psychology for guidance, given its focus on how organizations and cultures function. It seems beneficial for researchers in both performing arts and sports to take advantage of strides made in other domains, so that models created can be truly holistic in nature.

In summary, it appears that although talent in arts and sports take different expressions, their development seem to require similar factors. Although far from reviewed here in their entirety, these include a range of favorable intrapersonal, interpersonal, cultural, and environmental factors. In order to want to develop one’s talent at all, however, motivation is clearly a key consideration and consequently is the next topic considered.

Motivation

Not all that long ago, expertise researcher Ericsson (1997) stated that “our knowledge about the gradual acquisition of expert performance during decades of high levels of daily practice is greatly increased, but the motivational factors that maintain the daily efforts to keep improving continue to be largely a mystery” (p. 45). It is therefore encouraging that more can now be said about the fundamental topic of motivation. Advances in dance and music are being made with the theories that have found most favor with sport researchers in recent years, namely self-determination theory (SDT) and achievement goal theory (AGT). Additionally, the allied concept of passion has attracted attention. This section therefore focuses mostly on findings related to those three theoretical frameworks.

PASSION

Imagine entering a field that promises a 10-year performing career, or in which the unemployment rate at any moment in time is on the order of 90% to 95%. Even if we had the requisite talents, how many of us would embark on either course? Yet, as we have seen, there are individuals for whom the passionate and persistent involvement in an activity is of such immense importance that the issues of career longevity or low odds of success are viewed as trivial. (Kogan, 2002, p. 15)

Passion is an intuitively attractive concept in explaining why people want to practice, perform, and persist, and is often mentioned in performing arts contexts (e.g., Bonneville-Roussy et al., 2011; Fortin, 2009; Kogan, 2002; Manturzewska, 1990; Turner & Wainwright, 2003). Passion is the difference between just doing drama and being an actor, and between having a job as a dancer and being a dancer. It is precisely this being that means an activity has become such a part of the self that it is an inherent part of one’s identity (Vallerand et al., 2003). Because the identity of performing artists is so often tightly bound to their activity (e.g., Aalten, 2005, 2007; Mainwaring, Krasnow, & Kerr, 2001; Wainwright & Turner, 2004; Wainwright, Williams, & Turner, 2005), passion may be a promising research topic in the performing arts.

A recent study with high-level musicians (Bonneville-Roussy et al., 2011) revealed that 99% of them fulfilled the passion criteria stipulated as part of the passion scale (Vallerand et al., 2003). Among expert dancers, similarly high levels of passion have been found (Rip, Fortin, & Vallerand, 2006). Vallerand et al. (2003) note that levels of passion are logically lower in nonexpert samples; however, Vallerand’s group of researchers stipulate the activity for which participants score their passion (e.g., asking a group of musicians about their passion for music). Walker, Nordin-Bates, and Redding (2011) instead asked talented young dancers what their favorite activity was and had them complete the passion scale for that activity. Around 80% of participants put dance as their favorite activity and fulfilled the criteria for being passionate, whereas others were primarily passionate about some other activity—despite undertaking intense training in dance. This might be appropriate for young people, especially if early diversification versus specialization is of interest: that is, young people may be passionate about several activities and this, in itself, might be positive for the formation of a rounded identity. Further research is required to explore these ideas.

Research has demonstrated the utility of the passion framework with performing artists. For example, Rip et al. (2006) found that in a sample of dancers, those with higher rates of chronic injuries and greater use of health-threatening behaviors also reported higher levels of obsessive (rigid) passion. Dancers with better coping skills and those spending less time injured reported higher levels of harmonious (flexible) passion. Bonneville-Roussy et al. (2011) linked passion to AGT and deliberate practice, finding that higher levels of harmonious passion meant that musicians adopted mastery goals to a greater extent and reported greater...
well-being. The adoption of mastery goals was predictive of both deliberate practice behaviors and better performing. The pattern for obsessive passion was the reverse: Higher levels of this construct were associated with musicians reporting a higher rate of adoption of both performance-approach and performance-avoidance goals. Holding performance goals (whether approach- or avoidance-oriented) was negatively associated with performance attainment. Findings such as these provide a strong indication that harmonious passion is desirable for both well-being and performance.1

Given the positive outcomes associated with harmonious passion, it is a natural next step to examine ways in which this healthy passion can be nurtured. Bonneville-Roussy et al. (2011) suggest that training environments in which intrapersonal comparison is encouraged over social comparison would likely be helpful in this regard. On a related note, Fortin (2009) argued that the entire dance milieu is responsible for making dancers accept a culture in which obsessive passion is sometimes promoted and living with pain is normal. To examine issues like these, passion theory is usefully complemented by AGT (e.g., Ames, 1992) and its concept of motivational climates. Another promising avenue is SDT (Deci & Ryan, 2000; Ryan & Deci, 1985; see also Standage, 2012, Chapter 12, this volume), and SDT research with performing artists will be reviewed next, followed by research using AGT.

**SELF-DETERMINATION THEORY**

Although SDT research with performing artists is rare as yet, there is no shortage of indirect evidence that intrinsic and extrinsic motivation matter to artists. For example, the pursuit of enjoyment is often the primary reason for engaging in a performing art (e.g., Bond & Stinson, 2007; Houston, 2004; Papageorgi et al., 2010; Stinson, 1997). Enjoyment is also frequently sourced in the giving of music or communication of art, whether to an audience or through teaching (Hays & Brown, 2004; Papageorgi et al., 2010). Papageorgi et al. (2010) shared the following quote from a student musician: “There’s no pleasure really in learning how to get better and better and being a good player without carrying it on to other people” (p. 171). Poczwardowski and Conroy (2002) gave examples of how artists sometimes deliberately “let their ego go” because they perceived their art to be more important than themselves as individuals. This aspect of intrinsic motivation is rarely discussed in sport, but warrants attention. Positive psychologists (Peterson, Park, & Seligman, 2005; Seligman, 2002) have explored differences in happiness orientation, distinguishing the pursuit of pleasure from that of engagement and that of meaning. Perhaps the sharing of artistic works and the associated meaning-making is one way of pursuing a life that is both engaging and meaningful in service to others?

Intrinsic motivation originates in basic needs satisfaction (Ryan & Deci, 2000). That is, when we feel autonomous, competent, and related, our intrinsic motivation toward an activity grows. Less than a decade ago, Kogan (2002) wrote that “It is important that we examine both the intrinsic and extrinsic influences that propel individuals into performing arts careers and provide the satisfaction that keep them there” (p. 15). It is encouraging, therefore, that SDT research is emerging in dance (Quested & Duda, 2009, 2010, 2011). In the most systematic series of studies into dance and motivation to date, Quested and Duda demonstrated that those interested in the well- and ill-being of dancers (including affect, burnout, body perceptions, and even hormonal responses) should consider issues of motivation and self-determination; from a practical point of view, environments supportive of basic psychological needs appeared paramount to well-being (e.g., teachers providing autonomy support and social support). Although novel, the clear similarities of these studies to those in sport and exercise are important as they indicate that the arts community can avoid “reinventing the wheel” by taking those larger, existing literatures into account.

Despite the shortage of SDT research in music, some studies suggest it to be a valid framework there, too. For example, Schmidt (2005) found that the more intrinsically motivated music band students were, the higher their teachers’ ratings of both effort and performance achievement. A case study of a young clarinetist revealed that practice time for a self-chosen piece was 12 times greater than for pieces she was told to practice (Renwick & McPherson, 2002). The practice strategies she used were also more advanced. Thus, it appears that autonomy and intrinsic motivation can have an enormous impact, and it would be interesting to investigate the extent to which artistic practice is autonomous versus teacher-led. Certainly, there are accounts of the latter in the literature (e.g., Jørgensen, 2000; Persson, 1994), but how common are authoritarian styles now, in 21st-century studios and practice rooms? A longitudinal study by Brändström (1995) is also worth noting. He found that 80% of student musicians responded very well
to being given freedom to set their own goals and practice schedules; among the remaining 20%, however, there was evidence of negative reactions, including anxiety. The study is a reminder that autonomy support is not as simple as just providing freedom. Studies into autonomy support and into the potential moderating and mediating variables in the autonomy–motivation relationship (e.g., age; level of expertise; personality factors) would be valuable. For now, it is notable that several authors have mentioned the idea of balancing structure and freedom. For example, Renwick and McPherson (2002) reported that successful music students were likely able to balance the playing of pieces assigned by teachers with pieces they enjoyed and had chosen themselves. Sloboda and Davidson (1996) found that high achievers not only do more formal practice but more informal playing as well. Balancing structure and freedom has also been suggested to nurture creativity in dance (Watson, Nordin-Bates, & Chappell, 2010).

ACHIEVEMENT GOAL THEORY

As with SDT, achievement goal theory (AGT; e.g., Ames, 1992) has begun to be applied to the study of performing artists. In the first study of its kind, Nieminen et al. (2001) found that university dance students all endorsed task-oriented goals (focused on effort and individual improvement) over ego-oriented goals (focused on social comparison and public demonstration of excellence), but that those training to be performers were more ego-oriented than those training to be teachers. More recent work indicates a trichotomous model of achievement goals (Elliot, 1997) to be useful in music (Bonneville-Roussy et al., 2011; Smith, 2005). Two other studies with performing artists have added a fourth component to the trichotomous model: intrinsic goals, conceived of as achievement goals focused on enjoyment (Lacaille, Koestner, & Gaudreau, 2007; Lacaille, Whipple, & Koestner, 2005). Lacaille et al. (2005) compared musicians with swimmers and found that when recollecting previous performances, swimmers held more performance-approach goals prior to peak than catastrophic performances, whereas for musicians the opposite was true. All performers reported holding more intrinsic goals prior to peak performances, but this was especially true for musicians.

In a second study, intrinsic goals again emerged as being important in a sample of music, acting, and dance students (Lacaille et al., 2007): It was the only goal type to significantly predict self-rated performance. Holding intrinsic goals was positively associated with well-being (life satisfaction) and negatively with the intention to quit. Performance goals were associated with negative outcomes whereas mastery goals were unrelated to all other variables. Importantly, items tapping intrinsic goals were expanded beyond a focus on enjoyment to include such goals as absorption and audience communication (as was the case in the first study; Lacaille et al., 2005). This forms an interesting link with the intrinsic motivation found in communicating art mentioned above. Qualitative support for intrinsic goals is also found in the following quote from a conductor, linking achievement goals with the purposes of artistic activity and several other constructs:

People have all kinds of reasons why they do what they do. Some [reasons] are based on social concerns; some [people] are more concerned for themselves. If your purpose is to get a stamp of approval from somebody else, if your purpose is to be perfect, if your purpose is to get a good review or to be thought of as being more gifted than somebody else, if that’s what you’re all about, you’re going to be a mess your whole life. . . . And it will all be suffering for you one way or the other, because I think you’re not really fulfilling the purpose of art anyway. I think the main purpose of art is to be dramatic. That’s it. To be dramatic and then beyond that, to stimulate people’s thought processes and emotions and get their ideas going, to make them feel ultimately much more in love with life because of having contacted whatever it is you’ve intended for them. (Hays & Brown, 2004, p. 107)

As a final note, a few investigations have applied the evolving 2 x 2 achievement goal model (Elliot & McGregor, 2001) to music. In so doing, Miksza (2009a) found mastery-approach and performance-approach goals to be associated with positive music practice behaviors (e.g., time spent practicing, perceived efficiency), but correlations were small. In a second study, mastery-approach goals were associated with better achievement (Miksza, 2009b).

Overall, AGT has been used in few and rather disparate studies of the performing arts. Many findings are congruent with research in sport, suggesting that theoretical frameworks apply across domains, although others have produced divergent findings from those with athletes. Some caution should be taken in interpreting results, too, given that the measures used in several of these studies (Lacaille et al., 2005, 2007; Smith, 2005) have not undergone full
psychometric evaluations. Future researchers should try to elucidate further whether intrinsic goals and intrinsic motivation concerned with giving and communicating artistic messages can find homes in the achievement goal frameworks of the future—or whether other frameworks, such as SDT, are better equipped to make sense of these issues.

BASIC NEEDS SUPPORT AND MOTIVATIONAL CLIMATES

Only a small number of studies have examined motivational climates in the performing arts, most of which have been in dance. From the earliest dance climate research (Carr & Wyon, 2003) through to more recent work (Quested & Duda, 2009, 2010; Nordin-Bates, Quested, Walker, & Redding, 2012), findings from dancer samples resemble those with athletes in highlighting the value of task-involving motivational climates. For example, in studies by Quested and Duda (2009, 2010), dancers’ climate perceptions predicted basic needs satisfaction. Needs satisfaction was also predictive of positive and negative affective states. That is, dancers who perceived that their dance teachers focused on effort, individual improvement, and cooperation were more likely to report high levels of perceived autonomy, competence, and relatedness, and those with greater perceived needs satisfaction reported more positive and less negative affect. Other dance research has found that increased ego-climate perceptions over a 6-month period predicted increases in dancer anxiety (Nordin-Bates et al., 2012). Matthews and Kitsantas (2007) found that band musicians who perceived their conductors to be more task-involving were also more likely to rate them as supportive.

Although motivational climate studies are rare in the performing arts, the similarity of findings with domains such as sport, where such research is more plentiful, suggests that promoting task-involving climates is desirable also in artistic domain. With this in mind, it is positive to note that arts climates do appear to be perceived as highly task-involving and less ego-involving (Carr & Wyon, 2003; Matthews & Kitsantas, 2007; Nordin-Bates et al., 2012; Quested & Duda, 2009, 2010). Such findings contrast with the traditional view of dance and music instructors as demanding authoritarians (Buckroyd, 2000; Hays & Brown, 2004; Jowitt, 2001; Mackworth-Young, 1990; Persson, 1994; Renwick & McPherson, 2002; Smith, 1998; van Staden, Myburgh, & Poggenpoel, 2009). A recent small-scale study with ballet professionals tentatively suggests that differences may exist between schools and companies, however, and/or between ballet and other forms of dance (van Staden et al., 2009). In their study, several examples of a highly rivalrous, competitive, and critical dance milieu are provided. Clearly, the dance and music domains, and their subdomains, are too complex and varied to be categorized simply. Both classical and contemporary training contexts are worth further examination so that adaptive motivational climates may be better understood and promoted.

BEYOND TEACHER-CREATED MOTIVATIONAL CLIMATES

In addition to teacher-created climates, it has been proposed that the emotional climate in the home is another crucial formative factor for young musicians (McPherson, 2006a,b). McPherson argues that authoritarian parents can inhibit performance, whereas the provision of meaning, rationale, and encouragement of independent learning encourages development. He also provides excellent suggestions for how parents may foster motivation and performance enhancement, all in line with SDT (providing support for autonomy/meaning, relatedness, and competence). This is an important line of research because, as noted above, much of music learning takes place in the home, thus heightening the need for self-regulatory strategies. It would be interesting to see the extent to which parental support for basic psychological needs is impactful in performing arts activities and whether this support decreases as a performer becomes more self-regulated and independent later in his or her teens (Davidson et al., 1996).

A broader look was taken by Papageorgi et al. (2010) in researching institutional culture. Defined as “the quality and way of life within the institution and the conduct of the institution itself” (p. 151), institutional culture was found to relate meaningfully to the way in which music students felt about their learning. Jørgensen (2000) similarly argues that “educational outcomes like independence and responsibility must not be looked at as a private matter, concerning only the individual student or teacher, but as official, institutional responsibilities” (p. 74). This has echoes of the contextual models-approach to talent development mentioned above, as well as of Fortin’s (2009) argument that dance culture is responsible for what dancers come to see as acceptable. Taken together, it would be useful to combine research lenses from AGT (motivational climate) with an institutional culture view to get a better idea of how psychological characteristics,
and ultimately performance and well-being, are affected by the training context (see also the discussion of leadership in institutions, Chelladurai, 2012, Chapter 17, this volume). This is perhaps particularly warranted for acting, where there is a complete lack of research, but where concerns have been voiced:

I know teachers of other disciplines tend to understand their pedagogy fairly well or it’s being encouraged to understand their pedagogy. That, I haven’t seen in actor training. . . . Because someone’s a good actor doesn’t mean they’re a good teacher. . . . there are times when what’s going on is suspect and could be dangerous, not just on a physical level but a mental one. There are too many people out there playing amateur psychologists.

(Actor trainer, in Seton, 2009, p. 40)

Wider environments can perhaps also be examined as predictors of needs satisfaction, motivational regulations, and well-being outcomes. Hallam’s (1997, 2002) model of musical practice and its outcomes, incorporating intrapersonal (e.g., motivation), interpersonal (e.g., teaching style), and environmental components (e.g., school ethos, home support) might be a useful starting point for such investigations.

Flow

Strongly related to the topic of motivation is the notion of flow, or optimal psychological experience (Csikszentmihalyi, 1975, 1990). The original work into flow comprised performers from a range of domains including sport, music, and dance. It is therefore somewhat surprising that only a handful of studies into flow in artistic performance exist. Those that do exist are spread across dance, music, and theater, and all indicate the importance of intrinsic motivation for flow to occur (Bakker, 2005; Hefferon & Ollis, 2006; Martin & Cutler, 2002). Bakker (2005) even found that the intrinsic motivation of teachers was positively related to their students’ flow experiences. Factors found to promote and inhibit flow among dancers (Hefferon & Ollis, 2006) also appear broadly similar to those identified in athletic research (e.g., Jackson, 1995).

Bakker (2005) found that situational conditions at music teachers’ places of work (e.g., feeling autonomous and in receipt of appropriate feedback and support) were predictive of flow. Future research might consider using SDT to gain a better understanding of how performing artists can get into flow (Kowal & Fortier, 1999), and whether flow results in better performances. Although flow is conceptualized as peak experience rather than peak performance (see Harmison & Casto, 2012, Chapter 38, this volume, for a fuller discussion), a relationship has been found between flow and creativity as a performance outcome in composing (Byrne, MacDonald, & Carlton, 2003; MacDonald, Byrne, & Carlton, 2006). These researchers have also been part of developing applied work in music education based on the flow model (see also Byrne & Sheridan, 2000).

The links between flow and artistically valued concepts extend beyond creativity. In fact, it has been proposed that flow has significant conceptual overlap with the artistic notion of presence (Bradley, 2009). It is also possible that “being in a bubble” (i.e., completely absorbed) is more likely when a dancer is in character (Hefferon & Ollis, 2006; Walker & Nordin-Bates, 2010). In line with such speculation, one study reported that dancers were in flow more frequently during performances than during training (Jeong, Morris, & Watt, 2005). This makes sense in light of anxiety research, as reviewed below. It would be fascinating to better understand the role of characterization in the flow process.

As a final note, Hefferon and Ollis (2006) also highlighted how flow was unlikely when roles were easy; indeed, several dancers reported boredom during a particular role for the umpteenth time. It is a difficult but important job for the professional performing artist to try exploring variations in repetitive performing, and research into this notion would be most valuable—for instance, can imagery interventions be designed to increase the prevalence of engagement and flow?

Perfectionism

Especially in classical domains such as orchestral music and ballet, it is often said that performers are perfectionists—and perhaps need to be, in order to achieve high standards of excellence (e.g., Dews & Williams, 1989; van Staden et al., 2009). A music consultant interviewed by Hays and Brown (2004) considered musicians to be fearful of mistakes and driven to attain perfection; another interviewee described dancers as perfectionists, but actors as far more “laid back.” Still, perfectionism prevalence has gained surprisingly little research attention. In a recent study of high-level dance students in ballet and contemporary training, most students could be categorized into clusters labeled as having perfectionistic tendencies or moderate perfectionistic tendencies; few students fell into the no perfectionistic tendencies
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15, this volume), but further study with performing perfectionism in sport (see Stoeber, 2012, Chapter 5) is warranted—while keeping in mind that there are no "diagnostic criteria" helping us determine who can be labeled a perfectionist. It would also be worthwhile to further examine the findings from a qualitative pilot study that ballet dancers often report other-oriented perfectionism (van Staden et al., 2009).

More studies exist to indicate that perfectionistic cognitions are associated with experiences such as anxiety (Carr & Wyon, 2003; Kenny, Davis, & Oates, 2004; Mor, Day, Flett, & Hewitt, 1995; Nordin-Bates, Cumming et al., 2011; Stoeber & Eismann, 2007; Wilson & Roland, 2002). Work in music indicates that perfectionism may be incompatible, or at least unhelpful, when it comes to artistry. A conductor described it as follows:

If your aim is to be perfect, then the moment you make any mistake, you've already failed. But for me, the main purpose of, let's say, my doing a Beethoven symphony is to deliver the intent of the music. The technique of the piece itself is there to serve the dramatic ends of it. Your focus as an artist should be to master the techniques sufficiently to live with that dramatic intent. There can still be mistakes in the performance, there can still be lack of perfection in performance, and yet you can still fulfill the purpose. (Hays & Brown, 2004, p. 190)

Thus, although much remains to be researched in regard to the correlates and outcomes of perfectionism, there is reason to believe that it is meaningfully related to variables commonly addressed in sport (e.g., anxiety) and more artistic ones (e.g., dramatic intent). How perfectionism is conceptualized and measured also matters greatly; as such, some studies appear to have high negative correlates (e.g., Carr & Wyon, 2003; Kenny et al., 2004; Mor et al., 1995; Nordin-Bates, Cumming, et al., 2011; Nordin-Bates, Walker, & Redding, 2011; Wilson & Roland, 2002), whereas others have also identified some positive ones (e.g., intrinsic motivation; Stoeber & Eismann, 2007). Care is required in interpreting the findings from any given study, because there is no consensus as to what perfectionism actually is. This mirrors the debate around perfectionism in sport (see Stoeber, 2012, Chapter 15, this volume), but further study with performing artists is especially warranted because some appear to take pride in being labeled perfectionists, overtly stating that they pursue perfection in their art. Is this use of the term compatible with the literature—and is it helpful or hurtful? Most theorizing is also based on group averages and correlations, but, as noted, there is no cutoff value beyond which an individual can be labeled a "true perfectionist." Case studies of pronounced perfectionists (and of nonperfectionist high achievers) would be particularly welcome for this reason.

The origins of perfectionistic beliefs would also be of interest for further research. This is because, although conceptualized as a trait, perfectionism is seemingly affected by environmental and interpersonal aspects such as feedback. Says a music consultant:

If you look beyond the garage band, self-taught kind of musician, criticism has been an integral part of the music world since whenever. You have to do it right. If you listen to musicians talk to the conductor or their teacher or even their peers, the initial focus is always on “What did I do wrong?” or “How could I do better?” . . . So kids come in, since childhood, with this perfectionistic kind of belief, and I work real hard at changing that. There's more to making music than just following the notes on the page. (Hays & Brown, 2004, p. 191)

Disordered Eating

Intimately related to perfectionism is disordered eating. In fact, perfectionism is both a risk factor for disordered eating development (Tyrka, Waldron, Graber, & Brooks-Gunn, 2002), and an intrinsic part of it (Forsberg & Lock, 2006; Halmi et al., 2000). In dance, this raises important questions in relation to the prevalence of both perfectionism and of disordered eating. That is, if perfectionism is more prevalent among high-performing dancers than in the average population, as is sometimes assumed, does this account for the increased prevalence of disordered eating in this same group (Garner & Garfinkel, 1980; Hamilton, Brooks-Gunn, & Warren, 1985; Ravaldi et al., 2006; Ringham et al., 2006; Thomas, Keel, & Heatherton, 2005; Tseng et al., 2007)?

The extent to which prevalence rates of disordered eating vary among studies is remarkable. Ranging from 1.6% (Abraham, 1996) to 25.7% (Garner, Garfinkel, Rockert, & Olmsted, 1987) even when focusing only on female ballet dancers and anorexia nervosa, there is clearly no way to...
characterize dancers overall in terms of relative risk—let alone performing artists. And, although dancers have been the focus of most disordered eating research to date, Seton (2009) mentions eating and body attitudes as potentially problematic among actors, especially if an attitude prevails that bodies are there to be molded into anything for the sake of a role, whether it be smaller, bigger, more muscular, or just “more beautiful.” Thus, we must extend the study of disordered eating beyond dance—and certainly beyond females in classical ballet. But instead of focusing on prevalence using relatively small and homogeneous samples, it may now be time to direct research attention to the personal, interpersonal, and wider environmental and cultural factors contributing to disordered eating development and how they may be prevented or managed.

As noted, perfectionism is one such factor that appears to hold explanatory promise (de Bruin, Bakker, & Oudejans, 2009; Nordin-Bates, Walker, et al., 2011; Thomas et al., 2005). Other relevant intrapersonal variables include psychological aspects such as body image, self-esteem, achievement goals, and perceptions of personal control (e.g., de Bruin et al., 2009; Mor et al., 1995; Ravaldi et al., 2006; Tseng et al., 2007) and physiological aspects such as body mass index (BMI), age of menarche, and growth. These physical variables are relevant because early maturation is associated with being taller and heavier than one’s later maturing peers (e.g., Malina, Bouchard, & Bar-Or, 2004) and, at least in ballet, late matures are favored (Hamilton, Hamilton, Warren, Keller, & Molnar, 1997).

A number of studies have examined dancers’ BMI in relation to disordered eating, with varied results (de Bruin et al., 2009; Neumärker, Bettle, Bettle, Dudeck, & Neumärker, 1998; Ravaldi et al., 2006; Thomas et al., 2005; Toro, Guerrero, Sentis, Castro, & Puértolas, 2009; Tseng et al., 2007). Given that most studies are cross-sectional, this is unsurprising: High BMI can be a risk factor for disordered eating in an attempt to slim down and cope with body-related pressures (e.g., Tseng et al., 2007), while having low BMI may be indicative of an existing disorder. In sum, it would be valuable for psychologists to engage in both interdisciplinary and longitudinal research to better understand disordered eating as a biopsychosocial phenomenon in performing artist populations.

Interpersonal variables indicated as playing a part in dancers’ disordered eating include perceptions of pressure from significant others, such as teachers, parents, and peers (Berry & Howe, 2000; de Bruin, Oudejans, & Bakker, 2007; de Bruin et al., 2009; Garner & Garfinkel, 1980; McCabe & Ricciardelli, 2005; Reel, SooHoo, Jamieson, & Gill, 2005; Thomas et al., 2005; Toro et al., 2009), the motivational climate (de Bruin et al., 2009; Duda & Kim, 1997), and learning experiences regarding thinness in dance class (Annus & Smith, 2009). As an example of how intrapersonal and interpersonal variables have been examined together, de Bruin and her colleagues (2009) found that both ego-goal orientations and mastery (i.e., task-involving) climate perceptions predicted unique variance in dieting frequency. Thomas et al. (2005) speculated that perfectionism might represent a personality risk factor for eating disorder development regardless of dance school pressures, but that the latter may well enhance or lead to the expression of the former.

Even very important individuals, such as teachers, cannot be held solely responsible for something as complex as disordered eating attitudes, body dissatisfaction, or related variables; instead, the wider culture must be studied if we are to gain a holistic understanding. Indeed, whole institutions and inherited, passed-on beliefs about what is acceptable and valued have been associated with disordered eating in sociological studies (Benn & Walters, 2001; Gvion, 2008). In a qualitative study with students and professional dancers, it was noted that, “eating disorders may indeed be a form of adaptation to the ballet culture in which it appears that thinness is often interpreted by the institution as a sign of commitment or dedication and rewarded with advancement in the profession” (Benn & Walters, 2001, p. 146).

In summary, it appears that future research into disordered eating would benefit from considering a combination of intrapersonal, interpersonal, environmental, and cultural variables (see Petrie & Greenleaf, 2012, Chapter 34, this volume, for a fuller discussion of these issues in sport). As suggested in Chapter 29, this volume (Hildebrandt, Varangis, & Lai, 2012), appearance and performance-enhancing drug use is also a health concern that may be related to similar body image issues. In domains in which history, subjective criteria for success, and unpredictable feedback from teachers, directors, and the media may all influence how a performer comes to interpret his or her own adequacy, a multifactorial approach appears especially valuable. Notably, an intervention focused on creating a healthy school environment appeared to be effective in reducing the prevalence of disordered eating in an elite ballet school (Piran, 1999). In her intervention, Piran
worked to create systemic change through sessions with not just students and teachers but also administrative staff; topics ranged from the intrapersonal (e.g., changing emphasis from weight to fitness) to the interpersonal (e.g., disallowing teachers from making comments on students’ body shapes); and both psychological (e.g., body image) and physiological aspects (e.g., puberty) were addressed. It is encouraging to see such positive action being taken in a domain sometimes seen as old-fashioned and “closed” to outside influences.

Injury and Pain

Following logically from the discussion of disordered eating and perfectionism, we now turn to a discussion of the psychological aspects of injury and pain among performing artists. Dancers who are perfectionistic “high achievers” (Hamilton, 1998) or report more obsessive passion (Rip et al., 2006) have been suggested to suffer with more frequent and/or prolonged injuries. Those suffering from an eating disorder also run a greater risk of sustaining an injury (e.g., Kaufmann, Warren, & Hamilton, 1996; Liederbach & Compagno, 2001). Although not yet studied in music or theater, the same principle would most likely hold true also in those settings; that is, performers who are driven to attain an unrealistic goal or who simply cannot stand to give up their activity even in the face of negative outcomes may well go beyond what is sensible and healthy (e.g., pushing beyond fatigue), thus sustaining injury. They may also return from injury too early, thus heightening the risk of reinjuring themselves (Hamilton, 1998). These are valuable topics for further study with musicians and actors, too, because although there is research into musicians’ injuries from a physiological perspective (e.g., Heinan, 2008), literature on how psychologists factors may affect injury incidence or rehabilitation is almost nonexistent.

Again, such literature is at least emerging in the dance domain. Mainwaring, Krasnow, and Kerr (2001) reviewed the literature and concluded that dancers often accept pain as something normal, perform through pain, and are reluctant to seek medical attention. They describe dancers as subject to a “culture of tolerance” regarding pain and injury, and point out that those with an identity defined largely by their dance activity are especially likely to suffer more when injured. Seton (2009) describes a similar “culture of silence” among actors. Hence, it appears that just as cultural factors may contribute to the development of disordered eating, cultural expectations and norms encourage performing in pain and through injury in performing arts populations (Aalten, 2005; Fortin, 2009; Mainwaring et al., 2001; Seton, 2009; Turner & Wainwright, 2003). Studies have also reported that, perhaps as a result of a culture of tolerance, dancers often do not report their injuries for medical attention (Krasnow, Kerr, & Mainwaring, 1994; Mainwaring et al., 2001; Pedersen & Wilmerding, 1998; Robson & Gitev, 1991) and may be more interested in holistic therapies than traditional medical care. Mainwaring et al. (2001) note that this is at least in part due to a lack of confidence in the medical profession, with dancers feeling that they are not understood and that they may simply be told to rest—which they do not want to hear. The growth of dance science and medicine may have helped remedy this unfortunate situation for those lucky enough to have access to specialist care, but much remains to be done to optimize support in all performing arts domains. Nevertheless, it is positive to note that a recent study found that dancers did seem to follow advice given by health professionals after injury, and self-esteem was not lower among a group of injured dancers compared to their noninjured peers (Nordin-Bates, Walker, Baker, et al., 2011).

In the last decade, progress has also been made regarding how to help dancers prevent injury. A series of studies has examined how psychological skills and coping strategies are related to Korean ballet dancers’ injuries (Noh, Morris, & Andersen 2003, 2005, 2007, 2009). In the first study, dancers’ reported a wide range of dance-specific stressors, including competing for roles against friends and critical comments from directors. More than half of the sample (65%) reported some form of dysfunctional coping strategy (e.g., overeating) in response to such stress, indicating that further research into dancers’ coping was warranted. A second study found that coping skills were related to injury frequency and duration. In particular, dancers with low levels of coping skills seemed to be injured more often and for longer than those with a better coping skills repertoire (Noh et al., 2005). Finally, an intervention study was designed, comprising autogenic training, imagery, and self-talk focused on stress reduction (Noh et al., 2007). Dancers undertaking this combination of psychological skills training not only enhanced their coping skills but also spent less time injured during a 48-week period, compared to dancers in either a no-intervention control group or a group undertaking only autogenic training. This work represents a step forward in terms of helping...
us understand dancer injuries and also represents the only published psychological skills training intervention study performed with dancers to date.

Studies by Noh and her colleagues (2005, 2007) combined with those by others (Liederbach, Gleim, & Nicholas, 1994; Mainwaring, Kerr, & Krasnow, 1993; Patterson, Smith, Everett, & Pracek, 1998) show that the stress-injury model of athletic injury can be applied to dance. As a result, findings and recommendations from sport injury research are likely also relevant for intervention research and applied work with dancers (see also Heil & Podlog, 2012, Chapters 32 and 33, this volume, on injury and performance and on pain and performance). Does the model have merit also in music and theater settings? The nature of musicians’ injuries may differ from those of athletes and dancers, but the high prevalence of stress and anxiety in the music domain (see below) suggests that finding out more would be highly worthwhile.

Exploring Divergence: Research Topics Pursued Differently in Sport and Performing Arts

These topics have been grouped based on the different focus of studies performed in sport compared to the performing arts. As such, there may be more work to be done in bridging gaps between domains than in the areas previously discussed, but doing so may bring benefits to both “sides.” The selected topics include psychological skills; personality; anxiety, stress, and coping; and self-confidence and self-esteem.

Psychological Skills

Although an extensive range of studies in sport have examined psychological skills such as imagery, goal setting, self-talk, and relaxation (see Jones, 2012, Chapter 8, this volume; Theodorakis, Hatzigeorgiadis, & Zourbanos, 2012, Chapter 10, this volume; Cumming & Williams, 2012, Chapter 11, this volume; Beauchamp, Jackson, & Morton, Chapter 14, this volume), the same cannot be said for the performing arts. Instead, there are growing literatures on imagery in music and dance, but no studies focused on goal setting, self-talk, or relaxation. The only exceptions are the mixed-skills intervention study mentioned above (Noh et al., 2007), a handful of studies aiming to combat musicians’ anxiety in which self-talk and relaxation formed parts of interventions (e.g., Kendrick, Craig, Lawson, & Davidson, 1982; Stanton, 1994), and a discursive article on private speech in ballet and how its inhibition through authoritarian teaching may limit student learning (Johnston, 2006). Given the positive outcomes associated with goal setting and self-talk in sport, research into these understudied topics is warranted. Anecdotal evidence already attests to the potential benefits of such psychological skills in artistic domains (e.g., Hays & Brown, 2004); it is also logical that performers engage in mental rehearsal when learning a music piece, dance variation, or acting role. However, the arts add a complication for anyone wanting to undertake goal setting research in these domains; that is, they depend on subjective and varying performance standards. Moreover, feedback may be sparse or nonexistent in key evaluative situations, such as auditions (Hays & Brown, 2004), and in many dance forms, not even professional performers get individualized training, but practice in groups. These factors conspire to make the specific and measurable aspects of effective goal setting tricky, and it may be useful to work with tools such as goal attainment scaling (Kiresuk, Smith, & Cardillo, 1994)—or devise new, creative methods for research in this domain.

IMAGERY

The literatures on imagery in dance and music have numerous overlaps with that in sport, but differences exist: Dance studies in particular have tended to focus on artistic images based on metaphors, abstract notions, and descriptions of desired movement or sound quality (Franklin, 1996a,b; Hanrahan, 1995; Lewis, 1990; Minton, 1990; Purcell, 1990; Sweigard, 1974; Woody, 2002). Such artistic images all describe something that is not real, but it is a hugely varied category. For example, an actor may imagine conflicting emotions of joy and guilt as part of a role, a singer may imagine the tragic story of farewell that she is conveying to her audience, and a dancer that his movements are light and flowing, lifted up on a gust of wind. Artistic images such as these have been proposed to accomplish a variety of aims, including enhanced recall, body awareness, movement or sound quality, and even injury prevention through improved alignment. Anecdotal and qualitative evidence (Hanrahan & Vergeer, 2000; Nordin & Cumming, 2005; Woody, 2002) make it clear that performers and instructors alike do make use of a variety of artistic images, but the lack of research makes it equally clear that we have a long way to go before we achieve an in-depth understanding of artistic imagery. The idea that images should ideally be individualized for maximal effectiveness (e.g., Franklin, 1996a; Sweigard,
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level yet more difficult, but at least six studies have attempted to do just that.

These studies (all of which were with dancers and used metaphorical/abstract images and some of which were additionally based on anatomical principles) have been of mixed quality and resulted in mixed findings (Couillandre, Lewton-Brain, & Portero, 2008; Hanrahan & Salmela, 1990; Hanrahan, Tètreau, & Sarrazin, 1995; Krasnow, Chatfield, Barr, Jensen, & Dufek, 1997; Sacha & Russ, 2006; Sawada, Mori, & Ishii, 2002). Still, technical improvements were noted in two studies (Hanrahan & Salmela, 1990; Hanrahan et al., 1995), and, in two others, children learned better when imagery was part of their instruction (Sacha & Russ, 2006; Sawada et al., 2002). One study found changes in alignment following a combination of abstract imagery and verbal instruction (Couillandre et al., 2008).

In addition to artistic or abstract images, performers often engage in more concrete imagery, such as dancers going over movements and variations in their heads (Fish, Hall, & Cumming, 2004; Hanrahan & Vergee, 2000; Monsma & Overby, 2004; Nordin & Cumming, 2005; 2006a,b,c, 2007, 2008; Overby, 1990; Overby, Hall, & Haslam, 1998). Similarly, musicians rehearse through imaging finger placements, passages, and whole pieces of music (Clark, Williamson, & Aksentijevic, 2012; Godøy & Jørgensen, 2001; Holmes, 2005; Schoenberg, 1987). Some of the functions that imagery serves for performing artists also include those commonly noted in sport research, such as for learning, memorizing, and improving skills; boosting motivation and confidence; and managing anxiety (Clark et al., 2012; Clark, Lisboa, & Williamson, in press; Connolly & Williamson, 2004; Gregg, Clark, & Hall, 2008; Murphy, Nordin, & Cumming, 2008). For instance, Ross (1985) found that imagery improved trombone players’ performance, and Holmes (2005) reported that auditory and kinesthetic imagery were especially important for learning and performance enhancement with string instrumentalists. Interestingly, Holmes (2005) cites the fact that music educationist Seashore wrote of imagery as a necessity for memorization in 1938—but that few empirical studies have focused on the topic since then. Still, a review by Clarke et al. (2012) demonstrates that those music interventions that do exist have perhaps shown more similarity to sport than to dance imagery interventions: Overall, these seem to indicate that, as in sport (e.g., Driskell, Copper, & Moran, 1994), a combination of imagery and physical practice is more advantageous than either practice method alone or than no practice.

Imagery can also be used as pre-performance preparation (e.g., Clark et al., 2012; Clark et al., in press; Vergee & Hanrahan, 1998), and Hays and Brown (2004) provide a superb example of violinist and conductor Itzak Perlman doing a mock performance with as much detail as humanly possible—in his own house. In addition to dressing appropriately and other logistical aspects, the power of imagery was used to its full as he imagined his house as the Carnegie Hall. He even imagined announcements and a delay in the start of the performance, an approach consistent with the PETTLEP model of imagery (Holmes & Collins, 2001). However, performing artists also use imagery for a variety of purposes not typically discussed in sport, such as for exploring interpretive possibilities (Haddon, 2007), for inspiration, to get into character, and to convey emotion to an audience (Clark et al., 2012; Hanrahan & Vergee, 2000; Nordin & Cumming, 2005). They also experience spontaneous imagery (Haddon, 2007; Nordin & Cumming, 2005).

Two of the first studies to start bridging the gap between imagery research in sport and dance used the Sport Imagery Questionnaire (SIQ; Hall, Mack, Paivio, & Hausenblas, 1998) with ballet dancers (Fish et al., 2004; Monsma & Overby, 2004). Together, they indicated that dancers’ imagery experiences are related to their perceptions of anxiety and of self-confidence, but also that the SIQ may not be ideal for trying to capture the experience of dance imagery. Since then, a dance-specific imagery questionnaire has been developed (Nordin & Cumming, 2006c), and research with this instrument has extended the research relating to dancers’ self-confidence and anxiety; moreover, the questionnaire may also be applicable to the aesthetic sports (Nordin & Cumming, 2008). Measurement of imagery in the performing arts has otherwise generally borrowed questionnaires from domains such as sport, although Clark et al. (2012) give examples of novel designs in music research, including behavioral tasks and chronometry.

Imagery research in the arts has begun to address questions that have been less addressed in sport. First, it has become clear that teachers matter in the development of performers’ imagery experiences (Nordin & Cumming, 2006a,b; Persson, 1996; Woody, 2002). In fact, studies indicate that arts instructors use metaphorical images in their
teaching not only frequently (e.g., Woody, 2002) but perhaps more often than do sports coaches (Overby, 1990; Overby et al., 1998). Second, dance researchers have found that not all imagery is helpful to performers (Nordin & Cumming, 2005) and that those with perfectionistic tendencies experience debilitating imagery more frequently (Nordin-Bates, Cumming, et al., 2011). Further research into this topic is warranted, so as to maximize our understanding of how imagery can best be made facilitative, in sport as well as in arts. Finally, it is noteworthy that the dance intervention studies cited above all focus on imagery during movement, something that is common in real-life dance settings (Nordin & Cumming, 2005, 2007). Although it stands to reason that similar uses of imagery would likely apply also in other domains, this aspect is rarely studied in sport, music, or theater. The findings therefore beg the question of whether imagery use during actual movement can enhance performance in other domains. Only a handful of studies have mentioned the use of metaphorical imagery in sport (Efran, Lesser, & Spiller, 1994; Hanin & Stambulova, 2002; Orlick & McCaffrey, 1991; Ruiz & Hanin, 2004), although Ahsen’s (1984) triple code model, previously cited frequently in sport research, does mention metaphors in imagery. In sum, benefits may well be had not only for arts practitioners in learning from sport imagery, but also for sport practitioners in studying artistic imagery.

Imagery research appears well-developed in comparison to other topics, and we should therefore be closer to reaping benefits from it. For example, we may now be at a stage where evidence-based interventions can be designed to enhance artists’ performance and well-being. As noted, a mixed psychological skills intervention was found to reduce the injury duration of dancers (Noh et al., 2007); a valuable next step would be to examine the extent to which imagery is impactful on its own versus in combination with other psychological skills. A final note concerning how imagery works is warranted. Studies have begun to examine how imagery, perception, observation, and action are linked in the brains of musicians in particular (for a review, see Clark et al., 2012) and also dancers (e.g., Calvo-Merino, Glaser, Grèzes, Passingham, & Haggard, 2005). This mirrors developments toward a neuroscientific functional equivalence understanding of imagery in sport (for a review, see Cumming & Ramsey, 2008). Such work is exclusively focused on concrete imagery (e.g., mental rehearsal of skills), however, and it would be illuminating to integrate this emerging understanding with one of how artistic imagery is made effective.

**Observational Learning**

Despite the overlap between observational learning and imagery, the former (also known as modeling) is a psychological skill or method sometimes said to be overlooked in sport (McCullagh & Weiss, 2002; and see McCullagh, Law, & Ste. Marie, 2012, Chapter 13, this volume). Given that dance and music are commonly learned through visual observation and/or auditory modeling, studying these processes with artistic performers appears to be a fruitful avenue for research. To date, studies on observational learning appear to be more numerous in music (e.g., Dickey, 1992; Hewitt, 2001; Linklater, 1997) than in dance (Cadopi, Chatillon, & Baldy, 1995; McCullagh, Stiehl, & Weiss, 1990; Weiss, Ebbeck, & Rose, 1992), although studies exist in related areas such as expert–novice differences in how dance movements are perceived in the brain (Calvo-Merino et al., 2005) and the impact of mirrors on dancers’ learning and feelings about themselves (Brodie & Lobel, 2008; Dearborn & Ross, 2006; Ehrenberg, 2010; Radell, Adame, & Cole, 2002, 2003). Interestingly, it has been argued that both modeling and metaphorical imagery are crucial for teaching expressivity in music (Davidson, 1989). Juslin and Persson (2002) also report that although modeling is used for this purpose, this is not always easy given that top-level performances (such as may be demonstrated by a teacher to a student) may seem “perfect” and do not reveal their constituent parts. Sport psychology research into the use of peers and/or coping models (McCullagh & Weiss, 2002) may be helpful in this regard, as might the use of a relatively new questionnaire focused on the functions of observational learning (Cumming, Clark, Ste-Marie, McCullagh, & Hall, 2005).

**Personality**

In recent years, many sport psychologists moved away from the assessment of athlete personalities, but an increase in personality research in other areas of psychology has been noted (Beauchamp, Jackson, & Lavallee, 2007; McAdams & Pals, 2006). Beauchamp et al. (2007) suggest that the personality paradigm does have merit in sport, although correlating performance and personality is likely to be futile. For instance, they highlight how the Big Five personality trait dimensions (extraversion, neuroticism, agreeableness, openness to experience, conscientiousness; McCrae & Costa, 1999)
have potential for research. In the performing arts, researchers have demonstrated great interest in what makes artists “special” and different from nonartists. In some cases, different types of artist, such as actors and musicians, have been compared.

A number of studies have examined aspects of personality, such as extraversion-introversion, with findings that appear to vary with the samples studied (Bakker, 1988, 1991; Buttsworth & Smith, 1995; Cribb & Gregory, 1999; Dyce & O’Connor, 1994; Eysenck & Eysenck, 1975; Gillespie & Myers, 2000; Hammond & Edelmann, 1991; Kemp, 1981, 1996; Marchant-Haycox & Wilson, 1992; Nettle, 2006a; Reardon MacLellan, 2011; Stacey & Goldberg, 1953; van Staden et al., 2009; Wilson, 1984). Many researchers noted unfavorable personality findings for artists such as neuroticism and emotionality (Bakker, 1988, 1991; Dyce & O’Connor, 1994; Gillespie & Myers, 2000; Hamilton, Kella, & Hamilton, 1995; Kemp, 1981; Marchant-Haycox & Wilson, 1992; Nettle, 2006a; Taylor, 1997; Wills & Cooper, 1988). These traits may well be worth further investigation due to their inherent link with stress and anxiety (McCrae & Costa, 1999). Some studies have found high levels of openness to experience among artists (Dyce & O’Connor, 1994; Gillespie & Myers, 2000; Nettle, 2006a). This makes sense, because art is often about seeing things in new ways and opening up possibilities. Openness to experience is also part of creativity (King, McKee Walker, & Broyles, 1996), as further outlined below.

Finally, conscientiousness, although less studied than the traits just mentioned, is intriguing because of its conceptualization as involving self-discipline, organization, and diligence (McCrae & Costa, 1999). Thus, it has overlap with descriptions of striving for perfection. It would be worthwhile to examine what the overlap is between personality approaches to conscientiousness (as part of the Big Five) and perfectionism research in sport and arts. For example, one pertinent question to the fostering of optimal performance and well-being is the degree to which characteristics such as the Big Five and perfectionism are trait-like or state-like. They are all conceptualized as traits, and so should not be particularly amenable to change; however, studies indicate that they can be associated with environmental aspects, such as the motivational climate (e.g., Carr & Wyon, 2003), and several studies attribute their findings of “specific personalities” in performance domains to a combination of self-selection and environmental impact (e.g., Bakker, 1988, 1991; Kogan, 2002; Marchant-Haycox & Wilson, 1992; Wills & Cooper, 1988). Marchant-Haycox and Wilson (1992) explained it as follows:

[W]e cannot be sure to what extent people (a) gravitate towards their speciality within the performing arts because of their personality, (b) survive within the profession because of their personality, or (c) have their personality shaped in a particular direction as a result of experience within that profession. Probably there is some truth in each of these hypotheses.

If traits can be nurtured or diminished, then this would have implications for both research and applied practice: Indeed, perhaps it is time to move beyond the rather simplistic trait–state distinction and see personality characteristics as lying on continua of stability or adaptiveness. Alternatively, the concept of “characteristic adaptations” appears to have promise (McAdams & Pals, 2006).

Beauchamp et al. (2007) suspected that a key reason for the decline of personality research was researchers’ disgruntled attitudes toward research trying to establish a “personality profile of the elite athlete” and examining whether a particular personality type was associated with success. It will be old news to readers of this book that such studies produced inconsistent findings and that no particular “elite athlete personality” was ever identified. Beauchamp et al. (2007) also criticize some studies with athletes for being atheoretical and purely descriptive. Most performing arts studies could be criticized on similar grounds. It is suggested, therefore, that personality research with artists should divert attention toward questions that are founded in conceptual arguments and that have clear implications for performance and/or well-being, instead of trying to characterize “artists” through small-scale descriptive studies. In particular, we must resist the temptation to generalize the findings of a single, small-sample study to other samples and genres, especially when the majority of dance and music forms, and almost the entire domain of theater, are so understudied.

Measurement approaches in this field also deserve mention. As noted by Marchant-Haycox and Wilson (1992), the move away from psychoanalytic personality approaches led to researchers finding far less psychopathology with artistic samples than in earlier studies. A similar shift appears to have taken place regarding dancers’ self-esteem; that is, although personality studies (e.g., Bakker, 1988,
1991; Bettle, Bettle, Neumärker, & Neumärker, 2001; Marchant-Haycox & Wilson, 1992) and other writings (Buckroyd, 2000) state that dancers suffer from low self-esteem, that is not supported in recent research. This will be discussed more fully after the introduction of another topic related to personality, namely anxiety.

Anxiety, Stress, and Coping

Anxiety has been said to be “ubiquitous” in the performing arts (Hays, 2002) or at least very common (e.g., Bakker, 1988, 1991; Barrell & Terry, 2003; Kenny, 2005; Laws, 2005; Marchant-Haycox & Wilson, 1992; Papageorgi, Hallam, & Welch, 2007; Steptoe, 2001; Wills & Cooper, 1988; Wilson & Roland, 2002). In one study, musicians reported being affected by anxiety more frequently (47% of the time) than singers (38%), dancers (35%), and actors (33%; Wilson & Roland, 2002). Another reported higher, more frequent, and sometimes more debilitating anxiety among musicians than among athletes (Lacaille et al., 2005). Anxiety is the most studied performance psychology topic in music, which indicates the importance of the topic to those active in that domain. As a result, much of this section is devoted to studies with musicians, although the interested reader is directed to alternative sources for reviews (Kenny, 2005; Kenny & Osborne, 2006; Papageorgi et al., 2007; Salmon & Meyer, 1998; Steptoe, 2001; Taborský, 2007; Wilson & Roland, 2002). Research with dancers is interspersed throughout, although almost no research with actors exists as yet.

CAUSES OF ANXIETY

Papageorgi and colleagues (2007) created a model of musicians’ anxiety, attempting to integrate research in the field. This model makes it clear that musicians’ anxiety is similar to that of athletes or dancers. For example, factors cited as influencing musicians’ anxiety include individual differences and personality factors such as trait anxiety and perfectionism—factors that have also been studied in relation to anxiety in sport and, to a lesser extent, dance (Barrell & Terry, 2003; Mor et al., 1995; Walker & Nordin-Bates, 2010). Some less studied factors (e.g., insufficient development of metacognitive skills), were also suggested (Papageorgi et al., 2007). Altogether, a large number of personal, interpersonal, and environmental causes of anxiety were proposed. Among the personal causes, Papageorgi and colleagues (2007) identified a number of inherent aspects, such as age and sex; traits, such as introversion and trait anxiety; and environmental factors, such as occupational stress. Although a seemingly comprehensive list, many of the suggestions require more research attention before their model can be said to be conceptually thorough, evidence-based, and parsimonious.

Studies focusing on personal characteristics and anxiety have focused primarily on cognitions reflective of perfectionism and/or catastrophizing (Hays & Brown, 2004; Kenny et al., 2004; Kirchner, Bloom, & Skutnick-Henley, 2008; Mor et al., 1995; Lehrer, 1987; Sharp & McLean, 1999; Steptoe & Fidler, 1987; Wilson & Roland, 2002). Liston, Frost, and Mohr (2003) suggested that the large number of factors associated with performance anxiety among musicians in other studies (e.g., sex, trait anxiety, perfectionism) could be explained more parsimoniously in terms of two main cognitive aspects, namely catastrophizing and personal efficacy. It would be valuable to examine whether this proposal extends to other samples.

A number of additional personal sources of anxiety have been identified. Under-rehearsal, fear of injury or reinjury (Walker & Nordin-Bates, 2010), poor finances, job insecurity, and the strain of having to memorize large amounts of material (Hays & Brown, 2004) have been noted. The latter is obvious in acting, where performers typically must learn vast quantities of lines; it can also be important in music and dance, where long music or movement passages must often be retained. Particularly when performing at the last minute as a result of another’s injury, there can be major stress in trying to memorize a performance; however, some find this less stressful than other work, because expectations are typically lower (Hays & Brown, 2004). Role type or focus can also play a part: When immersed in character roles or focusing entirely on the music rather than on oneself, there may be no room for anxiety (Hays & Brown, 2004; Walker & Nordin-Bates, 2010). It would be interesting to examine whether an intervention focused on characterization and absorption (e.g., via imagery) would help performers manage their anxiety—and perhaps reach flow.

Among the interpersonal and environmental factors proposed to affect anxiety are audiences, exposure, and performance conditions (Papageorgi et al., 2007; Walker & Nordin-Bates, 2010). But although early studies seemed to find that the very existence of an audience could induce anxiety in musicians, or that the size of the audience was important (for a review see Papageorgi et al., 2007), it now appears that the audience–anxiety relationship is
more complex. For instance, the nature of the audience matters, with theater-goers being seen as more positive, and peers and professionals as more critical, with higher expectations (e.g., Hays & Brown, 2004; Walker & Nordin-Bates, 2010; Wilson & Roland, 2002). Helin (1989) found that dancers had higher physiological activation during final rehearsals than on stage, and a number of studies report that auditions are often the most anxiety-provoking performance situations (Hays & Brown, 2004; Seton, 2009; Wilson & Roland, 2002). As explained for acting auditions, “You put yourself in front of people on a regular basis and say ‘choose me’ and 9 times out of 10 they say ‘no, thanks’” (Seton, 2009, p. 28). Altogether, studies suggest that studio, rehearsal, and audition anxiety are just as worthy of study as performance anxiety and that factors common to auditions such as negative feedback, critical comments, and lack of feedback should be the focus of initial research attention (Hays & Brown, 2004; Kogan, 2002; Phillips, 1991). Of course, performing in front of peers could also be a highly positive, supportive experience, and this likely depends on perceived supportiveness, as well as person-level variables such as concern about how other people react to one’s performance (Lehrer, Goldman, & Strommen, 1990). Wilson and Roland (2002) proposed that audience composition (i.e., more or less knowledgeable) and proximity (e.g., being able to see facial expressions vs. pure darkness) are probably more influential in provoking an anxiety response than audience size.

As a related construct, performers’ feelings of exposure are related to anxiety (e.g., Wilson, 1997). Increased exposure may help explain why anxiety is prevalent even among experienced performers—in crude terms, because making a mistake is more obvious as the lead violin than when part of a large orchestra. This may be similar in sport, where some roles (e.g., quarterbacks in American football) are more visible than others. Accordingly, studies indicate that experience often does not decrease anxiety intensity, although it may help with anxiety management (Fishbein, Middlestadt, Ottati, Strauss, & Ellis, 1988; Steptoe, 2001; Walker & Nordin-Bates, 2010; Wilson & Roland, 2002). It also stands to reason that having one’s body exposed and scrutinized can be an additional source of anxiety in dance (e.g., Noh et al., 2009; Quested & Duda, 2011) and perhaps in theater.

Also related to audiences and exposure are expectations, whether from important others such as teachers and audiences or from the self. Therefore, expectations are both a personal and an interpersonal or environmental source of potential anxiety. Hays and Brown (2004) describe the case of an ex-dancer who struggled with expectations: “In my early years, I had the sort of success that was just astounding... [I] couldn’t cope with the fact that people were expecting great things from me all the time” (p. 139). Walker and Nordin-Bates (2010) present a similar example, in which an experienced dancer felt anxious because of a perceived need to continuously prove that he or she could still perform at the top level. Hays and Brown suggest that performing artists often feel that they need to prove themselves and their worth as part of competing for attention and recognition. Feeling a need to prove oneself may be related to mastery avoidance goals, and as such the 2 × 2 theory of achievement goals (Elliot & McGregor, 2001) may provide a useful framework to understand these issues.

As a final note, a number of performance-related conditions can affect performer anxiety (Papageorgi et al., 2007). Air quality for singers and stage sizes for dancers might be two such conditions. Similarly, a study with dancers identified that to achieve flow (in many ways the antithesis of anxiety), a number of factors such as costuming and hair needed to be “right” (Hefferon & Ollis, 2006). Although research into such conditions might be valuable to each domain, they may be so specific that no cross-domain generalizations are possible. If so, a general category may be adequate for models of research, and applied practice must simply search out which factors impact any given individual.

**ANXIETY MANAGEMENT**

Because under-rehearsal is a common source of anxiety, overlearning is a strategy to cope (e.g., Walker & Nordin-Bates, 2010); even better, overlearning and subsequent automaticity can enable emotional communication (Hays & Brown, 2004). Other anxiety management and coping strategies noted in qualitative studies include a range of psychological skills (imagery, self-talk, relaxation and breathing techniques), social support, and other social strategies such as being silly and joking with colleagues (Hays & Brown, 2004; Walker & Nordin-Bates, 2010). Barrell and Terry (2003) found that dancers reporting the use of problem-focused coping strategies also reported lower trait anxiety; dancers using more maladaptive coping strategies were more anxious. As with most topics, however, the literature on coping in the performing arts
arts is not as well established as in sport (see Jones, 2012, Chapter 8, this volume).

Alongside studies into spontaneous anxiety management, researchers in music have examined the effectiveness of various interventions. To date, no such studies exist in dance or theater. In a review, Kenny (2005) concluded that whereas both behavioral and cognitive interventions demonstrated some benefits, cognitive-behavioral approaches seemed most effective. However, conclusions were tentative due to the disparate nature of the studies and various methodological weaknesses. A number of other interventions not commonly examined in sport were also reviewed, with mixed evidence emerging for drug interventions, meditation, music therapy, the Alexander Technique, and other strategies. The mixed evidence and the differences in approach taken compared to sport psychology interventions suggest that all performance domains may benefit from learning from each other; indeed, even in a review as comprehensive as Kenny’s (2005), no sport research is cited. Some studies do include strategies resembling psychological skills training, however (Stanton, 1994). For instance, Kendrick, Craig, Lawson, and Davidson (1982) found that both behavioral and cognitive-behavioral approaches had some impact on pianists’ anxiety, although a cognitive-behavioral approach, called attention training, was superior. It comprised cognitive restructuring of self-talk from negative and irrelevant to positive, task-focused statements, as well as strategies to boost self-efficacy.

Much more research is required into psychological skills and other coping strategies as ways of managing anxiety. One approach could be listening to music, as has been suggested for athletes (Terry & Karageorghis, 2006). Given the inherent importance of music in many of the performing arts, studying this phenomenon with performers makes sense. For example, is it advantageous to listen to the same music you are about to perform, or are your own chosen songs that can calm you down or psych you up preferable? It would also be worthwhile to further examine somatic approaches commonly used for anxiety reduction (and general performance enhancement) in the arts, such as the Alexander Technique (Kenny, 2005; Wilson & Roland, 2002). In particular, it would be interesting to better document and understand what somatic approaches do, and do not, in common with other techniques (see also Strean & Mills, 2012, Chapter 31, this volume, for a discussion of somatic approaches in sport). Particular breathing techniques, for example, are emphasized in many somatic techniques, as well as in relaxation interventions.

Most studies concern themselves with overarousal and anxiety as a negative phenomenon, but the opposite can also be a problem. For example, musicians need to make sure that repeated performances do not become “too relaxed” (Hays & Brown, 2004). Similarly, anxiety levels may be high for final rehearsals and at the start of a show run, but levels can decrease over time, and if a show run is very long (e.g., a ballet company performing Swan Lake 50 times, or musical theater artists performing in the same show for years), underarousal is a more pertinent issue (Helin, 1989; Noice & Noice, 2002; Walker & Nordin-Bates, 2010). To date, no studies have directly examined strategies used to manage underarousal or even to maintain optimal arousal.

In summary, anxiety appears to be a problem in performing arts settings and perhaps especially in music. But although anxiety may be the most studied topic in music performance psychology, the literature is nevertheless behind that in sport in at least four regards. First, many studies do not separate trait from state anxiety; second, cognitive and somatic symptoms are not always distinguished. Few studies consider anxiety direction (Kenny, 2005), and, finally, most lack theoretical foundations. Papageorgi et al. (2007) explain the effects of anxiety using inverted U (i.e., the Yerkes-Dodson law; Yerkes & Dodson, 1908) and catastrophe theory (Hardy & Parfitt, 1991); however, neither has much evidence to back up its utility in explaining music anxiety. Multidimensional anxiety theory (Martens, Vealey, & Burton, 1990) was not mentioned at all, but has some support from a study with dancers (Walker & Nordin-Bates, 2010). The behavior of leaders, peer interactions, rivalry and cooperation, and task demands have also not been studied in regard to performers’ anxiety. For instance, would a drummer in a rock band not require different levels of arousal and anxiety compared to a harpist playing a requiem? Perhaps cognitive anxiety should remain low while somatic activation should vary according to situational demand? Hopefully, conceptually strong research will soon help answer some of these questions.

Self-Esteem and Self-Confidence

Performing artists, and dancers in particular, have often been said to suffer from low levels of self-esteem, self-confidence, or both (e.g., Bakker, 1988, 1991; Buckroyd, 2000; Hanrahan, 1996; Neumärker, Bettel, Neumärker, & Bettel, 2000;
Laws, 2005; Marchant-Haycox & Wilson, 1992). It is possible that factors such as feelings of exposure and vulnerability, having one’s identity tightly bound to the performance activity, subjective and varying criteria for judging success, lack of feedback, and possibly personality traits such as perfectionism and introversion may contribute to such self-perceptions (e.g., Fortin, 2009; Hays & Brown, 2004). In contrast, it has been suggested that elite athletes often have high self-confidence and self-esteem (see Beauchamp, Jackson, & Morton, 2012, Chapter 14, this volume). Before jumping to conclusions regarding domain differences, however, it is worth examining the nature of the evidence. In particular, those reporting less than positive feelings about the self among dancers have done so either based on work with ballet dancers (Bakker, 1988, 1991; Neumärker et al., 2000) via a small qualitative study (Hanrahan, 1996), single-item self-report (Laws, 2005) or anecdotally (Buckroyd, 2000).

More recent and larger scale studies report rather different findings; for instance, a group of young dancers in mixed styles reported moderately high self-esteem (Walker et al., 2011), as did a sample mixed both in regard to style, age, and level (Nordin-Bates, Walker, Baker et al., 2011) and a large sample of vocational school students (Quested & Duda, 2011). Similarly, Quested and Duda found that hip hop dancers (2009) and vocational dance students (2010) reported relatively high levels of perceived competence, as well as moderate to high levels of well-being. Domain-wide generalizations can therefore not be made, and further research is required to establish whether these constructs may be considered at healthy levels or problematic among performing artists—and how improvements may be made if and when the latter applies. Gender is also worth considering: Most dancers are female, and other research indicates that females usually report lower levels of both constructs than do males. The degree to which an activity like dance is gender stereotyped may also be important (Clifton & Gill, 1994).

There is a need for conceptual clarity when discussing these constructs because although everyday language often uses them interchangeably, self-confidence and self-esteem are conceptually distinct, with the latter more life domain- or situation-specific and the latter more enduring and generic. Sport research has typically focused more on self-confidence or self-efficacy, the most situation-specific form of feelings or evaluations of the self. Building on work done in sport, self-efficacy research may well deserve a more prominent place in performing arts research. It stands to reason that self-esteem may be more related to health and well-being, whereas self-efficacy is more related to performance. Additionally, the functional significance of self-confidence and self-esteem ought to be considered. Are they beneficial to performing artists? Studies addressing this question are limited, although it has been found that having high self-confidence can help performers interpret their anxiety as more facilitative (Papageorgi, 2007; Walker & Nordin-Bates, 2010). Hays and Brown (2004) labeled confidence “vital for performance excellence” in all domains. Still, performers sometimes say they do not want to be too confident, lest they become arrogant or complacent. An ex-dancer interviewed by Hays and Brown (2004) gave the following description of confidence-related problems in her domain while highlighting that confidence must be balanced by humility:

I don’t know if this is just in dance—it probably isn’t. I’m sure in the acting profession it’s kind of rampant too. Because of the kind of world it is, there are huge issues of insecurity and lack of confidence, and it’s a very tricky balance to remain humble and open and to have confidence in yourself at the same time.

(p. 66)

Although the idea of high self-confidence being problematic goes against the grain of most research (see Beauchamp, Jackson, & Morton, 2012, Chapter 14, this volume), a recent study demonstrated that reduced self-confidence can in fact improve sport performance in some cases (Woodman, Akehurst, Hardy, & Beattie, 2010). The concepts of confidence, overconfidence, and their relationship to risk taking (Campbell, Goodie, & Foster, 2004) remain to be examined. In fact, risk taking is of particular interest in artistic domains given its link to creativity (e.g., Chappell, 2007; Simonton, 2000; Sternberg, 2006). But despite the value of examining these notions, it seems safe to assume that self-esteem is generally positive even if a lack of self-confidence can sometimes improve performance in the way Woodman et al. (2010) indicate.

Exploring Novelty: Non-Sport Topics with Promise for the Performing Arts

This third and final section briefly introduces four psychological topics not commonly researched or discussed in sport psychology but which appear to hold promise in helping us understand the performance and well-being of performing artists.
These include creativity and inspiration, memorization, emotional expressivity, and audiences.

**Creativity and Inspiration**

Although there is literature into creativity in arts education (e.g., Byrne et al., 2003; Chappell, 2007; Chappell, Craft, Rolfe, & Jobbins, 2009; Fleming, 2010; Odena, Plummeridge, & Welch, 2005; Running, 2008; Sawyer, 2003; Smith-Autard, 2002), and in mainstream and positive psychology (e.g., Csikszentmihalyi, 1996; Simonton, 2000; Snyder, 2002; Sternberg, 2006), it is not a topic that has captured many sport researchers' imaginations. This highlights that performance psychology in the performing arts should develop an identity of its own that serves its particular needs. And although not researched much in sport, creativity is related to many commonly studied concepts, including intrinsic motivation and flow (Amabile, 1983; Byrne et al., 2003; Csikszentmihalyi, 1996; Koestner, Ryan, Bernieri, & Holt, 1984; MacDonald et al., 2006), motivational climates (Hennessey, 2003; Hunter, Bedell, & Mumford, 2007), and well-being (Simonton, 2000; Snyder, 2002). These relationships, as well as the inherent value placed on creativity in arts, suggest that investing more research attention in creativity is worthwhile.

Psychology research into creativity has traditionally been person-centered, product-focused, and somewhat elitist (e.g., studying the outputs of genius-level creators like Igor Stravinsky and Martha Graham; Gardner, 1993). Recently, however, at least three parallel shifts in focus have occurred. First, there is growing recognition that creativity is collaborative (Craft, 2008; MacDonald, Miell, & Mitchell, 2002; MacDonald, Miell, & Morgan, 2000; Sawyer, 2003), communal (Chappell, 2007), social (Gardner, 1993; Hennessey, 2003), and culturally determined (Gardner, 1993; Gläveanu, 2010). Second, researchers have started to examine everyday or “small c” creativity (Chappell, 2007) as distinct from the “Big C” or genius-level creativity upon which much past writing was focused (Craft, 2008). Third, there is a move toward studying processes rather than just products. Studying processes appears at least as important as products, because it informs us of everyday lived experience (Sawyer, 2000). For instance, the creative process of a dancer or choreographer might be associated with flow and a positive sense of self, but she experiences self-consciousness and anxiety when performing (product). For a research area concerned as much with well-being as with performance, what could be more interesting? Sawyer (2000) also points out that in improvisation, the process is the product, and in the arts, improvising is often a part of training and sometimes of performance (e.g., in improvisational jazz ensembles and theater groups; Sawyer, 2003).

The outlined shifts are of interest for two reasons. First, they highlight that creativity is worthy of study not only among the elite, but in performing arts generally. Second, they have implications for the study of group dynamics and leadership behaviors as factors that may affect creative processes, as well as products.

It is important to note that although creativity is an indicator of optimal functioning (e.g., Snyder 2002), associations between creativity and mental illness have also been found (Glazer, 2009; Nettle, 2006b). Nettle (2006a) points out that the personality traits of actors and other artists appear similar to those of individuals vulnerable to affective disorders (i.e., high levels of openness to experience and neuroticism). Presumably, we only want to encourage learning climates in which healthy creativity is nurtured even if ill health can also result in creative outputs. But what about creative performers with suboptimal functioning? How can the creativity of any “tortured geniuses” best be nurtured without exploiting their health? One suggestion emerges from the work of Barron (1972), who suggested that ego strength (resilience, self-control, and positive coping and well-being) is what makes the difference between certain traits (e.g., schizotypy and its associated high levels of unusual experiences) resulting in healthy or unhealthy creative products. Given the commonality between Barron’s concept of ego strength and many sport psychology constructs (see especially the discussion of coping strategies in Jones, 2012, Chapter 8, this volume), there may be ways in which performers could be taught to be resilient and self-regulate so that well- rather than ill-being might accompany creativity.

**INSPIRATION**

Inspiration is intuitively linked with creativity, but it has only been researched systematically in the last few years. Thrash and colleagues have established that inspiration is three-dimensional, comprising transcendence, evocation, and approach motivation (Thrash & Elliot, 2003); that it has logical links to variables such as creativity, positive affect, and self-determination (Thrash & Elliot, 2003, Thrash, Maruskin, Cassidy, Fryer, & Ryan, 2010); and that it predicts well-being over time (Thrash, Elliot, Maruskin, & Cassidy, 2010).
potential implications of this research for the performing arts are many: For example, do personality constructs such as perfectionism impact inspiration and creativity? Can environmental influences including autonomy support promote higher levels of inspiration, creativity, and well-being?

**Memorization**

For many performing artists, memory is of paramount importance (e.g., actors learning lines; Kogan, 2002; Wilson, 2002), and, as noted above, having to memorize can be a source of stress. Accordingly, memory has been studied in music psychology (Aiello & Williamon, 2002) and in acting (Noice & Noice, 2002) but less so in dance (Starkes, Deakin, Lindley, & Crisp, 1987). Examples of memorizing strategies include counting beats aloud in music (Ginsborg, 2002), inferring meaning to text in acting (Noice, 1992; Noice & Noice, 2002; Schmidt, Boshuizen, & van Breukelen, 2002), and marking in dance (small hand or foot gestures used to simulate actual, full body movements; e.g., Starkes et al., 1987). Wilson (2002) outlines a range of memorization strategies, two of which form interesting overlaps with sport psychology: learning within context and overlearning. To learn within context, Wilson encourages the actor to learn his or her lines on the stage with props, costumes, and so on (see also Noice & Noice, 1997). This resembles PETTLEP guidelines for effective imagery (Holmes & Collins, 2001), with an emphasis on contextual factors and making imagery as realistic as possible. It would be interesting to examine whether the sport literature on imagery as a learning tool can be of use to actors, and whether the ways in which actors learn and recall material have implications for best practice in other domains. Cognitive neuroscience appears an obvious adjunct to sport psychology if we are to learn more about performers’ memory encoding and retrieval; for instance, research has shown that high-level performers acquire highly specialized ways of encoding activity-specific information (Allard & Starkes, 1991; Calvo-Merino et al., 2005; Intons-Peterson & Smyth, 1987; Noice, 1991; Tervaniemi, Rytkönen, Schröger, Ilmoniemi, & Näätänen, 2001). Noice and Noice (2002) argued that actors employ “every strategy for facilitating recall that has been examined in cognitive psychology,” including depth processing and overlearning. The latter (learning until material is automatic) is said to be advantageous because attention can then be directed toward audience communication and artistry, with less risk of skill breakdown (Wilson, 2002). Interventions examining this point empirically would be most valuable.

**Emotional Expression**

References to artistic phenomena such as emotional expression, characterization, and audience communication have been interspersed throughout this chapter, but as topics in their own right they are not well researched—even though they are arguably the raison d’être of the performing arts. In this brief section, they are all referred to by the umbrella term *emotional expression* for simplicity.

Like memory, emotional expression has been studied in music (Juslin & Persson, 2002; Juslin & Sloboda, 2001) and acting (Noice & Noice, 2002) but less so in dance (Camurri, Lagerlöf, & Volpe, 2003). Still, dance and music both provoke emotional reactions by varying structural performance elements (Juslin & Persson, 2002), and so learning across domains may well be possible. Metaphorical images are logical aids to enhance emotional expressivity (e.g., Hanrahan & Vergeer, 2000; Juslin & Persson, 2002; Nordin & Cumming, 2005, 2006b; Woody, 2002). For instance, imagery-laden instructive terms such as “bouncy” have been said to be crucial in making music evoke emotion (Woody, 2002), and professionals are able to translate these into something perceived accurately and reliably by an audience (e.g., emotions such as joy; Gabrielson & Juslin, 1996). In short, imagery appears to be an effective way of creating expressive musical performance (see also Clark et al., in press). Future research could help illuminate whether imagery interventions can be designed to improve expressivity.

Wilson (2002) touches on the subject of emotional expression within the context of actor training. In contrasting what he terms the “imaginative” approach (Method and Stanislavsky approaches) with its more “technical” counterpart (French and British schools), many links to performance psychology, and especially imagery, are evident. For instance, it is likely that a method actor (who focuses on the internal life of a character in order that true emotion be felt and expressed in a genuine way) employs different types of imagery than does a “technically” trained actor (who focuses on how he is being seen by an audience, without personally generating or imagining the relevant emotions). How realistic should imagery be, lest it takes over and the actor (or dancer) forgets his lines or movements as a result of overwhelming emotion—and is this necessarily a bad thing in a powerful performance? Indeed, the clarity with which emotions are
communicated to an audience is what will be their (and the critics’) measure of success; not the intensity with which the actor actually feels them (Juslin & Persson, 2002; Wilson, 2002).

Wilson highlights Bloch’s method of training actors in emotional expression (entitled Alba Emoting), which is detached from inner sensation or emotional memory (Bloch, Orthous, & Santibáñez, 1987). Instead, it focuses on expressing emotions through adopting particular combinations of posture, facial expressions, and breathing patterns. Bloch and her collaborators have demonstrated that when actors replicate the breathing patterns associated with particular emotions, those emotions are partially experienced and are conveyed to observers (Bloch, Lemeignan, & Aguilera-Torres, 1991; Bloch et al., 1987). Interestingly, Bloch et al. (1987) found that actors trained in this detached manner were rated as more expressive than Stanislavsky-trained actors by independent judges. Bloch and her colleagues argue that their technique is healthier because it removes the need for reliving negative emotions from one’s past, and that it may prevent anxiety by putting the actor in control. Psychologists might do well to study these suggestions further, including whether differences in well-being exist between actors trained in different traditions.

It is important to distinguish between emotions associated with a particular role or character and emotions felt by the performer: in fact, Bloch et al. (1987) suggested that actors trained to express emotions in a detached manner were rated as particularly expressive because emotions relevant to the character or role versus those of the actor her- or himself were clarified. Studying this distinction in a somewhat different way, Konijn (1991) found that while character emotion was often felt in rehearsals, performing in front of an audience was colored by feelings of anxiety for them as people. Thus, integrating research into emotional expression (e.g., conveying anxiety to an audience as part of a role) and psychological skills training (e.g., anxiety management for the self) seems appropriate. This is perhaps particularly important in art forms or pieces where personal vulnerability is seen as positive (see, e.g., Seton, 2006), given how different this appears to the mental toughness so often praised in sport.

There is much to be done before a comprehensive psychological understanding of emotional expression becomes a reality. Such work, integrated with research performed in sport psychology, could help make sure that emotion in performing arts psychology does not become the “missing link” it has been said to be in sport psychology (Botterill, 1997). The performing arts are sometimes insular (Hays & Brown, 2004) and may resist some terms commonly used in sport psychology (e.g., performance enhancement) because they do not seem aligned with the purposes of art. As a result, work with concepts such as inspiration, creativity, memorization, and emotional expression may help performing arts communities embrace performance psychology as something they want to be part of.

Audiences

As with emotional expression, references to audiences have been made throughout this chapter, yet the role of audiences is not well understood. Audiences are clearly important in the arts, whether as a source of stress and anxiety or as a valued and inherent part of art—after all, communicating to an audience is often what performing is about. Sport literature on fan behavior and sport spectators may not transfer logically to the arts, given the different roles of audiences in the two domains. Success in the performing arts is arguably more fickle than in sport due to its subjectivity, and audiences help determine success: jubilant reactions may extend a show run and empty seats shorten it, and critics can lift a performer to the skies with a rave review or “shoot them down” with vehement criticism. For all these reasons, the reactions that people have to the arts—both performers and audiences—are attractive study topics, and it is encouraging to see audience research emerging. One example is the Watching Dance project, in which researchers performed interdisciplinary inquiry around topics such as audience responses, kinesthetic empathy, emotion perception, and the mirror neuron system (Reason & Reynolds, 2010; Reynolds, 2010). Perception is also studied intensely in music psychology and even has its own journal (Music Perception). Reviewing such work is outside the scope of this chapter, but together with related studies (e.g., Calvo-Merino, Jola, Glaser, & Haggard, 2008; Hagendoorn, 2005), these writings indicate that an emerging psychology of the performing arts may have many parent disciplines outside of sport psychology, including cognitive neuroscience, aesthetics, positive psychology, and others. Integrating these fields will likely lead to the growth of a rich, broad-based field with great potential for enhancing the lives of performing artists both on and off stage.
Conclusion

This chapter has attempted to explore a range of performance psychology topics as they apply to the performing arts. A tripartite structure was employed, with topics grouped according to apparent similarity with research in sport psychology. The three components are illustrated in Figure 5.1.

Exploring Convergence presented topics that have been researched somewhat similarly in sport and art domains. Topics within Exploring Divergence were grouped based on differences in research emphasis (and sometimes findings) between sport and arts. Finally, Exploring Novelty introduced topics that seem to hold great potential for psychology research with artists, yet have attracted little or no research in sport. It has hopefully become evident that although research into the psychology of performing arts performance has lagged behind such research in sport, there are many areas in which the domains could learn from each other. For example, the aesthetic sports may be interested in the imagery and emotional expression research done in dance and music, and the situational motivation and focus of athletes could perhaps also benefit from considering intrinsic goals (Lacaille et al., 2005, 2007).

Key emergent messages, one for each section, have been illustrated in Figure 5.1. First, a notion that emerged repeatedly in the Exploring Convergence section was that environmental and cultural factors seem to matter greatly when working to understand performing artists. For example, the social environment appears to play a part in the development of talent and passion, practice behaviors, disordered eating, and perhaps even affects performers’ personalities (see also McAdams & Pals, 2006). The culture of institutions and of entire domains (e.g., ballet subculture) was also proposed to affect the likelihood of performers developing healthy or unhealthy attitudes toward their learning, bodies, eating, pain, and injury. As such, future research into these topics could usefully focus not only on individual or interpersonal factors but also on environmental and cultural ones. In this way, a more holistic picture of what promotes optimal performance and well-being in the performing arts is likely to be gained.

In the Exploring Divergence section, a more intrapersonal focus was notable. The main emergent message was that if we are to actively help performers help themselves (i.e., promote self-regulation), further research into strength building is necessary. This might include psychological skills training intervention studies, examination of anxiety management strategies, and studies into whether performers’ feelings about their selves need to be improved; and if so, how. Combined with the message of the Convergence section, it seems that a particularly useful line of questioning might be to study the relative impact of intrapersonal, interpersonal, and environmental/cultural factors on well-being and performance outcomes. If considering, say, the experience of anxiety as a process, it would be

Figure 5.1 A tripartite overview of performance psychology in the performing arts.
valuable to better understand when, or under which conditions, intrapersonal and interpersonal aspects are most impactful. In this way, interventions could be designed in a more targeted and effective manner. For instance, if intrapersonal aspects were identified as influential sources of anxiety, then psychological skills training might be most pertinent; if teaching styles were the chief source of anxiety, then interventions focused on autonomy and social support may be better placed. Of course, these are highly complex questions and no single study could address them fully. Still, they represent a direction in which a series of studies may be able to build on each other to gradually develop momentum and understanding. If cultural factors are shown to be influential, a more complex question arises: Should the problem (e.g., increased prevalence of disordered eating in dance due to unquestioned assumptions that dancers must be underweight and of prepubescent shape) be accepted, and dancers taught coping strategies to manage? Or, should the ideals be challenged on a wider scale? Here, the issues clearly become more than psychological, related as they are to health and safety, politics, the history of the art form, and more.

The Exploring Novelty section highlighted that the fledgling field of performing arts psychology might do well to consider artistic aspects that can be conceptualized as psychological in nature. This includes creativity, inspiration, memorization, emotional expression, and audiences. Due to their lack of attention in sport research, there may well be a greater need to look to other “parent disciplines,” such as positive and cognitive psychology, for background literature, inspiration, and applied implications.

As an overall conclusion, the domains of sport, music, dance, and theater have much in common and a psychological understanding of performance in these domains therefore logically shares much common ground. To date, research has to some extent progressed in parallel and more integration holds considerable promise for all concerned.

Note
1. For a more complete description of the Passion model, see Young & Medic, 2012, Chapter 26, this volume.

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