

Wisdom from Gate-keepers:

Secrets of Success in Music Performance

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Introduction

How do gatekeepers affect the development of future musicians and other performers? What “secrets” can we learn from them? This article focuses on the contributions of gatekeepers in the career trajectories of classical musicians.

Data were collected in two metropolitan areas rich in classical music venues and daily newspapers that provide expert criticism of performances on a regular basis. We identified gatekeeper participants in each city who are either influential music critics or artistic directors for key cultural centers. They all exhibit enormous influence in determining which rising and existing stars will exhibit their talents or receive wide publicity.

Theoretical Premise: Abilities are Forms of Developing Expertise

The broad theoretical framework for this study is Sternberg’s (1985, 1997) theory of successful intelligence. We hypothesize that success is associated with exercising analytical, creative, and practical abilities. For example, musicians need analytical abilities to read a sheet of music, creative abilities to perform pieces in novel but appropriate ways that distinguish them from other performers, and practical abilities to know what kinds of creative innovations are likely to be well received by the public and which are not.

More specifically, this work rests on two theoretical premises: that abilities are forms of developing expertise (Sternberg, 1998), and that beyond expertise exists the realm of elite talent (Subotnik, 2000). According to this view, abilities are broadly conceived, and are important to various kinds of success. Abilities have interactive genetic and environmental components, yet are modifiable and capable of being flexibly deployed. The authors of this article view abilities as necessary but not sufficient for developing expertise or elite talent.

Substantial evidence exists that abilities can be enhanced, at least to some degree (see Feuerstein, 1980; Herrnstein, Nickerson, deSanchez, & Swets, 1986; Nickerson, 1986; Nickerson, Perkins, & Smith, 1985; Perkins, 1995; Perkins & Grotzer, 1997; Ramey, 1994; Sternberg, 1988, 1994, 1997; Sternberg & Spear-Swerling, 1996). The best evidence, of course, is in favor of both genetic and environmental origins of abilities, interacting in ways that are not, as yet, fully known (see Sternberg & Grigorenko, 1997). One question we explore here is how abilities can be developed to elicit elite performance.

Expertise involves using one’s abilities to acquire, store, and utilize at least two kinds of knowledge: explicit knowledge of a domain and implicit or tacit knowledge of a field (see Sternberg et al., 1995). We refer to domain as a knowledge base, and field as the social organization of that knowledge base (Csikszentmihalyi, 1988, 1996). Explicit knowledge is the kind most frequently studied in the literature on expertise (see Chi, Glaser, & Farr, 1988; Ericsson & Smith, 1991). It is knowledge of the facts, formulas, principles, and major ideas of a domain of inquiry. Implicit or tacit knowledge of a field is the knowledge one needs to know to attain success in a field that usually is not overtly or formally taught. For example, in music, the composition of a diminished seventh chord would constitute explicit knowledge, whereas how to get a gig would constitute informal or tacit knowledge.

We hypothesize that success is associated with exercising analytical, and especially creative and practical abilities. Successful intelligence is developed by knowledge of music in general and performance of the chosen instrument in particular, as well as unique personal styles, key personality characteristics, intense motivation, and access to requisite skills and tacit knowledge. For example, musicians need the creative intelligence to perform pieces in a way that distinguishes them from other performers. They also need exposure to the practical intelligence used by expert gatekeepers to distinguish creative innovations that are likely to be well received by the public from those that are not. Musicians need to surmount tremendous obstacles (e.g., rigorous practice schedules, critics, occasionally displeased audiences, serious competition) in order to succeed, and they have to take risks in their careers in order to get ahead. They also need an environment that provides opportunities to display their musical talents to those who can open doors to an advanced professional career. We hope, through the exploration of transitions in the development of elite talent in music, to build on the theory of successful intelligence by adding a level beyond musical expertise—recognition as an artist (Subotnik, in press).

What We Did

Participants

To date we have interviewed 6 gatekeepers as well as 16 studio teachers and 23 students at two nationally acclaimed music conservatories (see Figure 1). All interviews were taped and then transcribed. Each interviewee reviewed his or her transcript in order to ensure accuracy and to allow for additions.

Three departments at the conservatories were included in the study: strings, voice, and brass. This selection was based on an informal survey of conservatory admissions directors, who indicated that these three departments were most likely to include students from groups that were of particular interest to us, namely, under-represented minorities. By focusing our attention on the most diverse departments, we hoped to gain insights into one of our variables of interest, “being a person of color,” as it relates to opportunity and environment.

The gatekeepers were selected based on their positions of influence. Four are artistic directors of major classical music venues in two large North American cities. In that role they choose who will be hired to perform in their halls. Two others are respected critics whose writings enhance or detract from artists' reputations. Table 1 shows a demographic breakdown of participants.

Table 1: Demographic breakdown of interview participants.

	Voice	Brass	String	Total
Students	(M)=3 (F)=2	(M)=4 (F)=2	(M)=5 (F)=6	(M)=12 (F)=10
Faculty	(M)=3 (F)=1	(M)=3 (F)=2	(M)=2 (F)=5	(M)=8 (F)=8
Gate keepers	N/A	N/A	N/A	(M) 6 (F)=0

Instrumentation

We established a set of structured interview questions based on the theory of successful intelligence (Sternberg, 1997) as well as factors explored in Subotnik's previous research (Subotnik, 2000, in press). Each interviewee was read an introductory script and then was asked to (1) name factors influencing success, and (2) comment on a list of factors hypothesized to influence success at different stages in the career of a musical artist (see Table 2).

Table 2: List of factors on which interviewees are asked to comment:

Persistence through good and bad times	Self-confidence
Knowing your strengths and weaknesses	Social skills
Ability to learn quickly and to analyze structures and patterns	Technical proficiency
Risk taking	Knowing how to play the game
Teachability	Intrinsic motivation
Musicality	Charisma
Self-promotion	The quality of the student-teacher experience
Whether one is a person of color	Availability of external rewards such as money and recognition
Parental support and/or pressure	

What We Found

We present here each of the variables from the interview schedule with the associated gatekeeper responses. When there were notable differences between how the

gatekeepers responded and what students or studio teachers reported, we provide those comparisons.

Persistence through good and bad times

Gatekeepers take persistence for granted, given that major professionals will have endured and overcome rejection and other setbacks by the time they have acquired management and sufficient career recognition to be considered for these venues. Teachers, on the other hand, worry that their students' persistence may flounder when they leave the disciplined confines of the conservatory. Our student respondents view persistence as central to the life of an artist. They reflected the values of their early teachers, who socialized them into believing that a true musician will be prepared to suffer for his or her art.

Self-confidence

According to our gatekeeper participants, self-confidence matters in two respects. Artists need (1) to believe they have something important and unique to say and (2) to mask deep-seated needs for reassurance, as expressed in the quote below:

Having sufficient self-confidence to be able to perform is essential. I don't know of any great performer who doesn't suffer from uncertainty to some degree, no matter how successful their careers are by any rational measure. I know one celebrated pianist who takes me aside after every performance, while this person is surrounded by adulation, and walks away from the back-stage scene and says, "Was it okay?" and he means it. It's not a ritual. He, from the core, means it. Having enough self-confidence to perform is essential, but questioning oneself throughout one's career seems to be something that every great artist has [(Artistic director, concert hall)]

Knowing one own strengths and weaknesses

Sometimes gatekeepers' views of artists' strengths are different than those held by the artists themselves. These perceptions may also have conflict with what a studio teacher will have told his or her students. However, whereas teachers are trying to provide their students with information that the student can use in continuing their own development, gatekeepers are primarily looking to fill a needed slot in a program.

One gatekeeper, an artistic director for a major opera venue, provided example of an incident in which he recommended that a singer take on different role than the singer aspired to.

Maybe ten years ago, a singer in our young artist program [let us know that] the sorts of roles that he wanted to sing were those which complemented his personality. He wanted to be an ardent lover, and he wanted to do some roles that were just a little bit too heavy vocally. We said, "But this isn't what your voice is." For the first two years in our program, he resisted what we said. We then said, "Look, you've had an offer to go up to Boston to sing this role in X,

which will be technically very difficult for you. The character is a complete wimp. Please trust us, go and do it." He said, "Fine, but it's really not my thing." He went up to Boston and did it. At the performance I attended, he was not at all well, but he sang anyway based on his technique. Then he came back down and said to us, "Now I understand. You want me to be able to sing what I really should sing on technique, and not what I'm dying to sing because of my personality," and we said, "Yes, that's right." I'm happy to say that since then, he has understood what we were trying to say, and he accepted it. He has, since then, always stuck to what he should do even if it isn't necessarily what he wants to do, and he always makes a point of saying to us, "Thank you for keeping me on the right path." We explained to him that doing what he wanted to do would be a very short-term career move, and he didn't want that. He wanted the long-term career more than he wanted to sing the roles that we said were wrong for him.

When we queried the gatekeeper about how an artist can be successful without passion for a role, he assured us that the passion was for singing a performing, not for specific roles, "much like a swimmer loves to swim, matter if it's the crawl or breast stroke."

Social Skills

According to our study subjects, social skills will not trump talent, but if two equally talented individuals are being considered, the one with good social skills will get the job or the kudos. Gatekeepers do not view social skills merely etiquette or social graces, but rather as a form of professionalism. Being socially aware means being on time and prepared, returning phone calls, dressing appropriately. They contrasted professionalism with "knowing how to play the game," which they associated with self-promotion. From their perspective, when behavior too obviously reflects self-promotion, it can back fire.

Studio teachers emphasize the importance of being a good colleague try to model those values. Students reported the belief that if you are a good musician, prospective employers will come knocking on your door, oblivious of any other characteristic but the quality of your playing.

Knowing How to Play the Game and Self-promotion

The gatekeepers we interviewed recognized that self-promotion is necessary for success as a performer, and knowing when and how to promote oneself is part of being effective at securing jobs. However, they disdained efforts at channeling creativity into playing the game instead of into one's music exemplified in the quote below.

Knowing how to play the game. I don't quite know what that means.

Does it mean kissing up to the management so you'll get rehired?

Am I going to rehire somebody just because they gave me a bottle of wine at Christmas? No. Turning up on time, knowing your stuff and the rest of it. I'd

rather have that than a bottle of wine. (Artistic director, symphony hall)

Teachers believe that they need to prepare their students to play the game, being graceful in success and failure, and engendering a reputation as a professional. Students find the notion of game-playing repulsive. They believe that if you are a good musician, you should not need to play any games in order to succeed.

Learn Quickly and Analyze Patterns

Gatekeepers meet artists at an advanced stage of the talent-development process. Although most teachers are attracted to students who learn quickly, according to gatekeepers, a candidate's speed of learning is viewed as valuable only when they are called in as a substitute for a part. According to our gatekeeper participants, what is more important is that the artist knows accurately how much time it will take him or her to master the material.

Being able to analyze patterns in music is more important for solo or chamber instrumentalists than for singers. The gatekeepers say that the quality of the performance is reflected in the artists' understanding of the overall architecture of the piece. Singers, however, are not held to the same standard. Because many vocalists have come to their profession much later in life than instrumentalists, and have not been exposed to the same depth of musical education, they are not expected to have mastered music theory and structure. According to the gatekeepers, singers also are less concerned about this aspect of their development.

If a singer can analyze and sing a very difficult Schoenberg score rhythmically, but sings sharp or flat, it doesn't make them any good. It depends upon the singer, the voice, and the alternatives you have as to whether or not they're going to make it. (Artistic director, symphony hall)

Technique

Gatekeepers witness a limited range of technical proficiency in that a low level of technique would most certainly keep a candidate out of the running for performance opportunities. Nevertheless, gatekeepers consider the possibility that a technical flaw can be interesting, and that passion can sometimes make up for lack of technical proficiency. According to one gatekeeper, "some what flawed" is better than "push the play button." Once again, singers are considered differently than instrumentalists, since they can also make up for less than perfect technique with their stage presence or the loveliness of their sound more so than can instrumentalists.

If you are driving along the interstate and if you're flipping through radio stations on the car radio and you happen to hear a few snatches of Pavarotti's sound, for most people it's the only instantly recognizable one. The sound is stunning. He's a great singer, don't misunderstand me, but I can't say he's got good musicianship because he doesn't. (Artistic director, opera house)

Another important point made by one of the critics is that technique can be constrained by one's physical abilities.

Sports medicine has gotten more sophisticated in the last twenty years, and I remember a show where they actually looked at muscle tissue of Bill Rogers and other marathoners versus sprinters, and they found differences. Bill Rogers had certain kinds of cells, but not other kinds of cells, versus a sprinter, and it made sense why he was a marathon [With all the persistence in the world, if he had tried to be a sprinter, his body would have said, "No, that's not what you're supposed to be!"] So, I think on some level, with technique, it's the same thing. There's a certain kind of facility that you come up against. Think of a singer. You may think you were born to be a Wagnerian soprano by temperament and passion and intension, but if your voice is not [for] that, then it's not [for] that, and you have to face it—you just can't do it. Your voice is too light for that. (Music critic)

Risk Taking

The prompt of the words "risk taking" elicited two different responses from the gatekeepers. They talked about risk taking on the part of artists. As mentioned earlier, gatekeepers enjoy artists who are exciting and somewhat unpredictable in their communication of music.

I'd say that risk taking is very high on the list as a positive. Somebody who just cooks a piece to what they think is the right level of perfection and then tries to deliver that each time is of much less interest to me than the person who takes it to this level and this level and keeps going. That's exactly the quality that Isaac [Stern] was after. If you take no risks, then why are you doing this? (Artistic director, concert hall)

Gatekeepers need to be risk takers themselves when it comes to the choices they make for performers in their halls, or whose careers they encourage. Audiences enjoy some predictability and visual stimulation. Artists who may be better musicians may also be less popular at the box office than someone who is very physical. Devising a schedule that balances new compositions and performers with well-performed chestnuts is a risk taking responsibility that is an integral part of an artistic director's job.

Teachability

The gatekeepers who served as our participants hire or write about solo or chamber artists. They argue that teachability is much more important to orchestral playing, where you need to collaborate with many others under the direction of a conductor. They also indicated that not all proffered advice is good. At this stage in a solo or chamber artist's career, he or she must be able to distinguish between good and bad advice.

Teachers consider teachability as a very attractive quality in a new student. If a student seems resistant to instruction in a conservatory audition, he or she will not be viewed as a good investment in the teacher's studio. Over time however,

teachers expect their students to "bite back," insistent on keeping his or her own style, voice, or message.

Students are socialized into thinking that they should always be open to learn from the wise ones. They are just starting to come into their own, and those who appear to be overly unteachable have been selected out of the pipeline by not being admitted to a conservatory. Pre-college age students are especially devoted to following the instruction of their teachers.

Intrinsic Motivation

When gatekeepers reviewed the list of variables in our interview schedule, they clumped together intrinsic motivation, persistence, and self-confidence as qualities possessed by artists who come to their attention. They believe that motivation should be directed to musical creativity and not careerism.

A couple years ago, I was asked to give the commencement talk at the X School for the Arts, and I talked about my partner, who's a resident in psychiatry. Every time I talk about him, people say, "That's such a long road! It's so hard," and I think, yes, it's hard, but there's a definite payoff. You know you're going to be a doctor. Even when you're an intern and a resident, you're a paid, working doctor, and at the end of that, you have choices. You can be a humanitarian, you can make a ton of money, and you can go practically anywhere.... You can do good work and do well financially. So, I said [to the audience] that you could get through anything if you know that there's only one more year, one more course. But you all are doing all this stuff for what? You're going to finish these degrees with no guarantee that it's going to do anything. That's hard. Then I said, "But what do you have? You love what you do, and it's a minority of people in the world who can say that about their work. That's worth a lot of uncertainty and adjustment." (Music critic)

Musicality

Although we have argued for the plasticity of abilities, the participants in this study viewed musicality, a central feature of musical talent, as being innate. They also believe, however, that wider exposure to music opportunity would expand a limited view of how innate ability manifests itself.

My intuitive feeling is that most little children are musical, and that it's very rare to find those who truly don't have some innate musical response and skill. The idea of somebody being tone deaf is not impossible, but it's almost unheard of. But our musical training is so appalling, by and large, starting from elementary, that that gets routed out of kids right away. It's not "cool." And there's even this way in our culture, whereby a chorus of little kiddies singing out of tune is thought to be so cute. "Oh, aren't they adorable." It's not cute to me because I hear them and think, "They can sing in tune." They absolutely could if somebody would just help them to sing, and listen to their ear. In the 19th century,

before we had radios and phonograph records, many, many people in the family were musical because if you wanted music in your life, you had to make it yourself. You had to sit around the piano, and sing and play, so in general, audiences were much more musically sensitive and sophisticated than they are today because today's don't have to be. (Music critic)

Another respondent, an artistic director, said that young children first learn to be musically expressive by imitation and example. They learn musical "tricks" to elicit sadness, excitement etc. A great artist, however, is truly in vested emotionally. According to this artistic director, nothing compares to the experience of live performance with an emotionally engaged artist.

Charisma

According to our participating gatekeepers, there are two kinds of charisma: one centered on the artist and one centered on the music. Artists of the first kind draw people to them because their presence is larger than life ("Look at me!"). Another kind arises from their performance. This kind of charisma evokes, "Listen to this!" instead of "Look at me." The gatekeepers valued both types of charisma, but recognized the power of the first type to draw audiences and attention.

Student-Teacher Relationships

Teachers are the center of young musicians' lives for many years. However, those gatekeepers who hire artists did not identify teacher-student relationships as particularly important since they usually deal with agents or management companies rather than teachers for recommendations. If a performer is engaged for a performance and needs assistance, artistic directors will provide coaches to help them prepare their parts. They expect artists to take direction and not be stuck in their teachers' style, no matter how powerful the teacher's legacy might be.

Whether One is a Person of Color

All our participants agreed that the music world is far less odious for performers of color than it once was. The artistic directors recognized how important having artists of diverse backgrounds can be for enticing new audiences to the concert halls, but viewed this imperative as more pressing for community performances than for elite venues. When it comes to the latter, the main concern of the gatekeepers is the talent and charisma of the artist.

According to one of the music critics, opera has become more and more focused on the visual dimensions of the production. Ironically, African American women have been able to transcend the ethnicity of the leading roles while African American men have not. Another critic said the opera was doing a better job of integrating artists of color than symphonies. He went on to say that unless an artist of color is willing to transform adversity into "I'll show you!" their frustration might kill their talent.

The gatekeepers decried the dearth of African Americans in the classical music stable of stars. They also acknowledged the tremendous growth of artists from Asian

backgrounds. The only explanation offered was that the Asian and Asian American cultures are deeply invested in classical music while the African American culture is not.

Availability of Rewards Such as Money and Recognition

According to the gatekeepers, money is less important to artists than recognition, but they need money to live, so it is appropriate to want financial rewards. On the other hand, gatekeepers say that the best artists seek recognition but not fame, when being a star becomes more important than being an artist. Of course, gatekeepers hire people who are famous when they are needed for their box office appeal, and critics review their appearances because they are popular. Throughout our interviews we encountered the gatekeepers' perpetual struggle to educate and excite the music public while providing the familiar repertoire as a source of pleasure to a large proportion of concertgoers.

Parental Support

According to the participating gatekeepers, unless they are dealing with a prodigy, parents are not in the picture by the time they interact with most artists. However, they acknowledge that parents can either contribute to a performer's well-being or drain their energy.

If you have to fight your parents [it is exhausting].

You have to fight enough things in yourself: your insecurity, the voice in you saying, "I don't want to do this. How can I be so foolish?" There are a lot of parents who give mixed messages because they like the idea that their child is learning music and taking art classes, going to ballet or something, but that's just for refinement and they don't really want them to get carried away with this stuff. They still think of it as a star field. It's like acting. You either become Russell Crowe, or you're nobody.

Summary and Implications

After synthesizing the data we collected from all the participants in the music study, we elicited some implications that were especially salient in the responses given by the gatekeepers. Although their numbers are small, these gatekeepers represent the most powerful cultural influences in the United States, and their generous commentary is therefore not only interesting but also important. Our summary and implications address: (1) the transitional nature of factors underlying giftedness, (2) the role of tacit knowledge in developing expertise and elite talent, and (3) the influence of innate abilities in differentiating elite music talent from other levels of music performance or other domains of eminence.

Transitions and the Theory of Successful Intelligence

Our gatekeeper participants agreed that all the factors we listed for them in the interview schedule were relevant to the development of elite music talent and that the factors' respective weights shift over time, lending credence our transition theory. For example, parental pressure or support is important early, but not at the point at which the gatekeepers encounter mature or young artists. Teachers play a small role at later stages as well, whereas they central

role of influence during a developing artist's beginning, adolescent and young adult years. Learning quickly is less important in a career, as long as material can be learned in time for rehearsal. Technical prowess and persistence or emotional fortitude are also viewed as important, but are assumed part of the package of competencies that an elite artist would have available. Knowing how to play the game and self-promotion are necessary unpleasanties in the business. But an artist without these skills can also pawn them of agent. Identifying strengths and weaknesses can also be handled with professional advisors and a regime of disciplined practice.

A few of the factors were viewed as important in some arenas and not others. For example, teachability (almost exclusively in relationship conductors) is more important with singers than with other instrumentalists because of the lower esteem held for singers by conductors.

The gatekeepers acknowledged that artists needed money and did grudge them that need except when young performers over estimate talent's market value. They also acknowledged that ethnicity played a career success, but that role was ambiguous.

Those factors which are most sought by gatekeepers are those that the artist most interesting and unique. These include musicality, charisma, professionalism, and the self-confidence to take interesting musical risks profound love of music that comes from internal sources.

The theory of successful intelligence encompasses the factors we presented to the gatekeepers. All of them could be subsumed under the categories analytical, creative, and practical abilities. The contributions of this study to the theory lie in the additive nature of the process. Elite talent evolves from early focus on analysis during training, to a later focus on practical a during career preparation, and finally on creativity as a recognized artist.

Role of Tacit Knowledge

The gatekeepers we interviewed believe that much of the tacit knowledge' needed for career success can be made more explicit. Some conservatories are even offering courses in "Reality 101" as part of the required curriculum. One of the gatekeepers conducts workshops with young conservatory singers to share what he looks for when engaging artists for his opera hall.

We have a young artists program here. I was talking to kids in it yesterday because in a couple of weeks, I'm going to the college of music in X to talk to the kids there about what it is they're going to discover once they leave college and get into the real world. So I said to our kids here, "What is it that you wish you had been told and they gave me quite a list that was reasonably unanimous. They all said, "Oh, well, I wish somebody had said [to] do this, this, and this, and I wish somebody had actually de-romanticized it all." So, that's what I'm going to tell these kids. I'm going to say, "Look, if you want to get hired, of course you have to have talent. If you haven't got talent, you won't be hired, but listen to me, take notes

and do this, this, this and this." (Artistic director, opera hall)

Students have a very idealistic picture of what goes into acquiring a successful career. We are encouraged by the concern that the gatekeepers have expressed for nurturing young talent. Their efforts to share the realities of the music enterprise are both generous and intelligently self-serving. We hope that the tacit knowledge is shared in a way that does not elicit cynicism the sacrifices made to serve their art in a pure fashion has so thoroughly captured students' hearts and imaginations and keeps them going.

Innate Abilities and Elite Talent

In the world of academia it is rare to hear of abilities described merely innate. In the world of elite music performance, however, there was universal agreement that musicality, the basis for music talent, and other factors on our list such as charisma, are innate abilities. According to our participants, these factors can certainly be enhanced, but not taught. Even the repertoire one can sing or play is limited by inherited physical traits. The best summary of this viewpoint was offered by an artistic director who said that in terms of importance, "the things that you can't teach outweigh those you can."

What explanations can we offer to explain this conundrum for those of us who view abilities as malleable? We can propose that what are viewed innate abilities by musical gatekeepers and studio teachers appear that way because of the selected population that they work with. All have had environments that enabled them to succeed, so the restriction of range in environments may be greater than in innate abilities.

Our participants are not arguing for group differences, but rather for individual differences. They acknowledge that some groups have far more exposure to musical training and that training will enhance one's innate propensities. Rather, the focus is on distinguishing among those who have had the same quality of opportunities on every account. Some are more expressive and exciting performers than others.

We can also hypothesize that abilities can be developed and enhanced to levels of competence, and maybe even to levels of expertise. It appears that in the performance arenas, however, the difference between an elite artist and a musician may indeed involve inborn proclivities in some degree. Environment can help make the most of these abilities, or it can leave them under developed.

Author Note

The study reported in this article was conducted as part of an ongoing, multi-dimensional investigation. The larger study is cross-disciplinary, incorporating both music and academics, with an emphasis on transitions—how different academic, performance, and personality variables become important at varying stages of an artist's or scholar's development. Methodologically, the study compares the responses of three groups of participants: students, teachers, and gatekeepers (individuals who are instrumental in determining the success of aspiring artists and scholars).

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References

- Chi, M. T. H., Glaser, R., & Fan, M. J. (Eds.). (1988). *The nature of expertise*. Hillsdale, NJ: Erlbaum.
- Csikszentmihalyi, M. (1988). Society, culture, and person: A systems view of creativity. In R. J. Sternberg (Ed.), *The nature of creativity* (pp. 325—339). New York: Cambridge University Press.
- Csikszentmihalyi, M. (1996). *Creativity: Flow and the psychology of discovery and invention*. New York: HarperCollins.
- Ericsson, K. A., & Smith, J. (1991). Prospects and limits in the empirical study of expertise: An introduction. In K. A. Ericsson & J. Smith (Eds.), *Toward a general theory of expertise: Prospects and limits* (pp. 19—38). Cambridge, UK: Cambridge University Press.
- Feuerstein, R. (1980). *Instrumental enrichment: An intervention program for cognitive mod* Baltimore, MD: University Park Press
- Herrnstein, R., Nickerson, R. S., deSanchez, M., & Swets, J. A. (1986). Teaching thinking skills. *American Psychologist*, 41, 1279—1289.
- Nickerson, R. S. (1986). *Reflections on reasoning*. Hillsdale, NJ: Erlbaum.
- Nickerson, R. S., Perkins, D. N., & Smith, E. E. (1985). *The teaching of thinking*. Hillsdale, NJ: Erlbaum.
- Perkins, D. N. (1995) *Outsmarting IQ: The emerging science of learnable intelligence*. New York: Free Press.
- Perkins, D. N., & Grotzer, T. A. (1997). Teaching intelligence. *American Psychologist*, 52, 1125—1133.
- Ramey, C. T. (1994). Abecedarian project. In R. J. Sternberg (Ed.), *Encyclopedia of human intelligence* (Vol. 1, pp. 1—3). New York: Macmillan.
- Sternberg, R. J. (1985). *Beyond IQ: A triarchic theory of human intelligence*. New York: Cambridge University Press.
- Sternberg, R. J. (1988). Intellectual development: Psychometric and information-processing approaches. In M. Bornstein & M. Lamb (Eds.), *Developmental psychology: An advanced textbook* (2nd ed., pp. 261—295). Hillsdale, NJ: Lawrence Erlbaum Associates.
- Sternberg, R. J. (1994). Changing conceptions of intelligence and their impact upon the concept of giftedness: The triarchic theory of intelligence. In J.L. Genshaft, M. Bireley, & C.L. Hollinger (Eds.), *Serving gifted and talented students* (pp.33—47). Austin, TX: Pro-ed.
- Sternberg, R. J. (1997). *Successful intelligence*. New York: Plume.
- Sternberg, R. J. (1998). Abilities are forms of developing expertise. *Educational Researcher*, 27, 11—20.
- Sternberg, R. J., & Grigorenko, E. L. (Eds.) (1997). *Intelligence, heredity, and environment*. New York: Cambridge University Press.
- Sternberg, R. J., & Spear-Swerling, L. (1996). *Teaching for thinking*. Washington, DC: American Psychological Association.
- Sternberg, R. J., Wagner, R. K., Williams, W. M., & Horvath, J. A. (1995). Testing common sense. *American Psychologist*, 50(11), 912—927.
- Subotnik, R. F. (2000). Developing young adolescent performers at Juilliard: An educational prototype for elite level talent development in the arts and sciences. In C. F. Van Lieshout & P. G. Heymans (Eds.) *Talent, resilience, and wisdom across the lifespan* (pp. 249—276). Hove, UK: Psychology Press.
- Subotnik, R. F. (In press). Transforming elite level musicians into professional artists: A view of the talent development process at The Juilliard School. In L. Shavinina & M. Ferrari (Eds.) *Beyond knowledge: Extracognitive facets in developing high ability*. Mahwah, NJ: Erlbaum.

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