

Chapter 2 - Holland's Integration of Career Theory, Research, and Practice

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John Holland was my professional mentor for more than 35 years, and our periodic phone conversations about the profession, publishers, and people were lively and informative. His ideas initiated many of the topics I have written and presented about. Indeed, inspection of my vita indicates that about 24% of it is on RIASEC theory and its applications. I told Gary Gottfredson (who was John's most frequent collaborator) that I was giving this talk, and he suggested that I should, "Have a good time with it, speak bluntly, and channel John." I need to do that channeling part because the other chapter authors in this section are able to speak in the first person about their theories.

Holland visited Florida State University (FSU) twice, once for a career theory symposium in 1968 and 10 years later to examine the tactile board (Figure 1) format of the Self-Directed Search (SDS) we had created for use by persons with visual disabilities (Reardon & Kahnweiler, 1980). Both visits had a big impact on me. This board version of the SDS was a forerunner of later SDS formats (e.g., computer, Internet, Vocational Exploration and Insight Kit, smart phone, and mail-in scoring service).

Holland's critique of the woodworker's skills in creating the SDS tactile board version was my first hint at the varied nature of his interests. More evidence of this was revealed later in his SDS results reported by Stephen



Figure 1. SDS Tactile Board

Weinrach (1996). Holland's scores were R = 26, I = 27, A = 29, S = 26, E = 29, and C = 8 providing a summary code of A/EI. Holland viewed it as AEI/R/S. His high profile elevation and lack of differentiation suggests he was open to a number of occupational options and the eight occupational aspirations provide further evidence of that. His Aspirations Summary Code was SAE with these occupations listed: psychologist/researcher (social psychologist = ASE), writer (AES), research administrator (research worker = IER), vocational counselor (counselor = SAE), college teacher (SEI), counseling

center director (counselor = SAE), musician (ASI), and engineer (RES). Given these varied interests and skills, Holland would have been an interesting and perhaps challenging counselee. And for our purposes here, I think they reveal some things about his life and theory.

In preparing this paper, I followed Gottfredson's suggestion and channeled Holland by

- reading and rereading many of his publications;
- reviewing my correspondence with him;
- listening to and viewing recordings of his numerous interviews and talks;
- drawing upon materials in the book that Janet Lenz and I just wrote (*Handbook for using the Self-Directed Search: Integrating RIASEC and CIP Theories in Practice*, Reardon & Lenz, 2015);
- visiting The State Historical Society of Missouri on the University of Missouri Columbia campus and examining some of Holland's papers and artifacts archived there; and
- reading and using Holland's words from an unpublished autobiography, *My Life with a Theory* (Holland, 2004).

I believe the theme of this conference, "Integrating Theory, Research, and Practice" (hereafter referred to as TR&P), is one that Holland would have seized upon because much of his life and career were devoted to exploring and embracing these three areas.

Relevance of Integrating Theory, Research, and Practice

A review of Holland's contributions in TR&P should begin with his statement of purpose. In *Making Vocational Choices*, Holland (1997, p. 1) listed three questions his theory sought to address:

- What personal and environmental characteristics lead to satisfying career decisions, involvement, and achievement, and what characteristics lead to indecision, dissatisfying decisions, or lack of accomplishment?

- What personal and environmental characteristics lead to stability or change in the kind of level and work a person performs over a lifetime?
- What are the most effective methods for providing assistance to people with career problems?

These three questions relate to the theme of this conference in numerous ways that I examine in this paper, and I think they are distinctive among career theories.

As I reviewed Holland's lifetime of work, I concluded that the integration of these three areas epitomizes it. In his autobiography he explicitly points out how his experiences in college and in the military, along with jobs at Western Reserve University, the VA Hospital at Perry Point, the National Merit Scholarship Corporation, the American College Testing Program, and Johns Hopkins University, necessitated that he focus on research and data analysis, creating and validating instruments, and improving the theory at various times. He continued this work during his retirement after 1980 and until his death in 2008. Holland (2004) identified specific people, including family members, friends, and neighbors, as well as events (involuntary departure from ACT; directing the Center for the Social Organization of Schools at Hopkins) that contributed in varying ways to his work. However, the overwhelming theme of it all was his persistence, creativity, and resourcefulness in sustaining the theory's viability. The fact that we are discussing it today over 55 years after the first formal article, "A Theory of Vocational Choice," was published in the *Journal of Counseling Psychology* (Holland, 1959) is further evidence of its all-encompassing impact.

Focusing on Theory and Research

Spokane and Schultheiss (1996) summarized the way Holland integrated TR&P. They described him as a "rebel by nature" and as interested in the intervention side of measurement as he was in the scaling side, which was emphasized in his doctoral program at the University of Minnesota. They concluded that his research style was characterized by relentless empirical trials and examinations followed by theoretical reformulations. This recursive combination of data and theory was largely responsible for the theory's success and its numerous

inventories and applications (Spokane & Schultheiss, 1996).

In discussing the theory's development, Holland (2004) described the contributions of two philosophers, Herbert Feigl and Bill Alston. Feigl taught a course in the philosophy of science at the University of Minnesota which got Holland interested in theoretical endeavors that contrasted with the prevailing views in the psychology program. Later, Alston helped Holland develop a more defensible theory. While Holland's critics complained that the whole scheme was too simple, Alston urged him to simplify it more because it was too complex in some places (e.g., the formulations for the types were filled with clinical ideas and constructs that did not lend themselves to empirical testing). Further, Holland (2004, p. 19) noted that

Alston got me to see that “interests” were dispositions and not simple, automatic traits that are expressed without regard to the environment or other competing traits. His writing implied that a person's profile of “interests” can be viewed as a “tendency field” composed of competing interests—an idea that I made explicit only recently. (Holland, 1997)

For Holland, theory and research were inseparable.

The cost of writing a theory that is a literary venture is minimal, but the long-term cost of researching theoretical ideas for clarification, revision, or replication is great. (Holland, 1994, p. 46)

Later, he wrote

Several roads may lead to the development of more useful career theory. These include a shift from advocating a favourite theory to collecting evidence (broadly construed) to demonstrate its value. Another road is to revise an old theory and see if it leads to important practical or theoretical outcomes. (Holland, 1998, p. 557)

Focusing on Theory and Practice

In discussing the development of the SDS, Holland indicated that practical service delivery options weighed heavily:

I wanted to see if I could create an inventory that would be self-scored and would avoid the problems involved in separate answer sheets, mailing, scoring, and so on. I did not anticipate the positive reactions that the SDS stimulated in users and professionals. (Holland, Powell, & Fritzsche, 1994, p. 51)

In the Weinrach (1980) interview, Holland noted that the SDS evolved over a period of years, roughly 1953–1970, in rhythm with the development of RIASEC theory and the Vocational Preference Inventory (VPI). For example, the VPI came first and demonstrated that short scales of equal length scored “yes” and “no” arranged in RIASEC order could provide a basis for effective measurement.

“In test construction, I relied more on following my theory in item selection rather than on item theory—old and new” (Holland, 1994, p. 81). This comment reminded me of a personal conversation many years ago when Holland told me about the development of the SDS 4th edition and deciding which items to include. Some good items had similar psychometric numbers but only 11 could be included in that section of the Assessment booklet. Holland said, “I had Amy (Powell) read the items to me several times, slowly, so I could determine which best exemplified the type and should be included in the SDS.” Probably no better statement demonstrates Holland's understanding of the relationships among theory, practice, and research than this one.

Focusing on Holland's Tripartite Integration

In the autobiography and reflections on his work during the early days at Hopkins, Holland (2004) indicated he was surprised by how much he had forgotten and “how thoroughly the theory and the SDS were integrated in our research and thinking” (p. 9).

I don't think it is possible to provide an accurate and comprehensive account of the many interactions among the theory, its instrumentation, the

research data, my colleagues' work and thinking, and my own. The only interpretation I feel confident about is that the main elements of the theory provided a rough framework for organizing our research that in turn led to the revised theory. (Holland, 1973)

In order to document the scope and nature of Holland's contributions, Foutch, McHugh, Bertoch, and Reardon (2014) used bibliographic research tools to identify publications from 1953–2011 on RIASEC theory and its applications. They located 1,970 reference citations to Holland's work during the 58-year period and categorized them into five areas: (a) application of the theory in practice, (b) research and practice directed to specific populations (e.g., K–12, age, occupation), (c) tools or instruments operationalizing the theory, (d) validity and efficacy of RIASEC theory, and (e) diverse populations studied in terms of ethnicity, disability, and status. Because some references could be categorized in multiple ways, a total of 3,312 references were cited across the five categories. For example, an article about theory might also include material on applications and diversity.

Foutch et al. (2014) found that the largest reference category was Applications (1,298; 66%), followed by Specific Populations (745; 38%), and Theory/Typology/Validity (580; 29%). The Applications category included references that described the way Holland's theory and applications had been used in practice (e.g., for specific groups, with special populations, to develop specific programs, and so on). The Diverse Populations category included references based on gender, race, nationality, disabilities, and socioeconomic status. The Theory/Typology/Validity category included references relevant to the theoretical constructs and empirical evidence for the reliability and validity of Holland's theory and its applications.

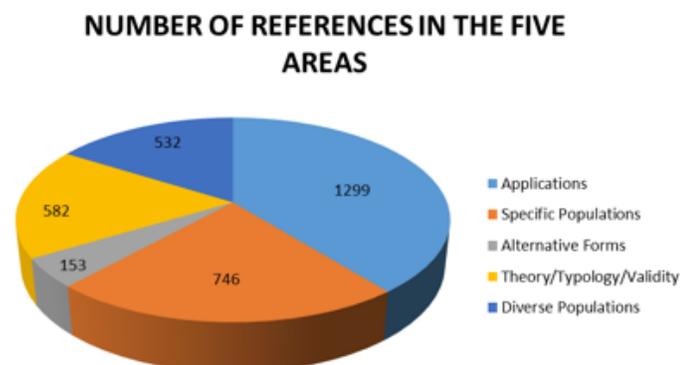


Figure 2: Number of references in the five areas

It is noteworthy in terms of this SVP conference that so many publications related to Holland's theory connect to the practice of career counseling and program development. This theory seems to have retained its viability because it is so useful and practical for persons worldwide to understand and apply. Sampson (2016) noted that RIASEC theory (Holland, 1997) has been integrated with CIP theory in both the study of vocational behavior and the delivery of career interventions (Reardon & Lenz, 2015). It has also been incorporated into so many other tools and programs that the theory and hexagon have become icons in our field. Indeed, the synthesis of TR&P is the essence of Holland's work and SVP 2016 conference speakers repeatedly referenced this in their papers and presentations.

The SVP conference organizers asked presenters speaking about career theories to address the challenges and opportunities related to each theory. After reviewing theoretical issues and thinking about it, I identified 10 challenges and opportunities and briefly discuss them in the following pages. I chose not to focus on issues such as level of congruence and job satisfaction, the shape of the hexagon in a global context, postmodern views of matching theories, the possible changing nature of work, or personality stability from youth to adulthood. Others have written about these issues in various publications.

Challenges in Integrating Theory, Research, and Practice

Holland was never shy about identifying the challenges he faced in integrating TR&P. In this section, I will try to summarize some of them in no order of importance.

1. **Theory Unprotected.** Because a career theory cannot be copyright protected, the ideas included in RIASEC theory can be and have been incorporated into many different career assessments and measurement tools. Holland had no control over this use of his theory, with the result that some applications do not fully or accurately reflect the theory as he understood it, and the applications can produce conflicting results. This circumstance complicates the integration of TR&P because not all applications are theoretically accurate or equivalent. For

example, the three-letter codes for occupations vary across different classification systems (Reardon & Lenz, 2015). Eggerth, Bowles, Tunick, and Andrew (2005) found that the O*NET, SII, and *Dictionary of Holland Occupational Codes* disagreed on first letter code assignments about one third of the time.

2. **Instruments Protected.** In contrast to the theory, Holland authored numerous instruments and systems based on RIASEC theory that are protected by trademark [™] or copyright © and persons seeking to use these resources in their research or practice need to obtain permission from the copyright holder and publisher, Psychological Assessment Resources, Inc. These tools (e.g., SDS and Occupations Finder) are not free to use. The challenge is that unlike research tools or free assessments, these costs may curtail the use of these resources in practice and research. Together, the open nature of the theory and the proprietary nature of Holland's RIASEC tools provide some distinctive challenges for integration in terms of TR&P.

To further illustrate this point, practitioners and researchers should be aware that the three-letter SDS code is not always identical to the codes in the Strong Interest Inventory (SII, 2%) and the O*NET Interest Profiler (OIP, 11.8%) which also draw upon RIASEC theory. Holland and Messer (2013) found the first and second letters of the SDS code matched the first and second letters of the other two codes 13.7% (SII) and 9.8% (OIP), respectively. These findings indicate that the SDS codes are not completely the same across different interest measurers. Practitioners and researchers should be mindful of this fact when using RIASEC codes obtained from various instruments.

3. **Theory Changes.** A career theory should show stability and continuity over time, and this is true of RIASEC theory. If the theory changes dramatically each time it is revised, one might wonder if it is valid. However, the theory should also be modified as new research and information further clarifies and extends it. Reardon and Lenz (2015) suggested that RIASEC theory

changed about 20% from 1973–1985 and another 15% in 1997, but they suspected that Holland would have thought it changed less over this time. Integrating TR&P using the most recent statements of the theory is the challenge posed to practitioners and scholars today, as ideas in the theory have evolved and been refined. Practitioners and researchers should use and build upon the most current statements of RIASEC theory.

4. **Environmental Neglect.** Holland (1997) defined environments with a strong or clear identity as having a limited set of consistent and explicit goals, while those with a weak or diffuse identity have a large set of conflicting and poorly defined goals. Holland, Fritzsche, and Powell (1994) offered some observations about the weaknesses of the theory, including the idea that hypotheses about career environments needed more research support, hypotheses about Person–Environment interactions had received some support but required more testing, and that classifications of occupations have differed slightly according to the instruments used. Perhaps because counselors are more focused on persons than environments, the environmental side of the typology has received less attention in research and practice. The remedy for this poses a challenge.
5. **Linking Theory and Interventions.** “I should do a better job of linking the typology to vocational interventions” (Holland, 1994, p. 50). Indeed, although Holland fully described the SDS and related tools, he never placed them directly into the working procedures of a counseling or career center. Perhaps this reflected his lack of time working in such offices. For example, how exactly would the My Vocational Situation (MVS; Holland, Johnston, & Asama, 1993) be used to screen persons lacking readiness for educational or career decision making? Would it be part of an intake procedure? How would SDS results be used in follow-up sessions if the secondary constructs indicated more intensive interventions would be required? Holland never provided operational procedures for

linking theory and various kinds and levels of interventions, or who might provide them.

6. **Massive Literature.** Holland's RIASEC theory has generated an enormous amount of information reported in journal articles, book chapters, and professional presentations, and it has not diminished in recent years. As noted earlier, Foutch et al. (2014) identified almost 2,000 citations regarding the theory and its applications. This imposing body of literature poses a challenge for practitioners, researchers, and reviewers seeking to understand the optimal ways to draw upon this work. How does one know if all relevant studies pertaining to the secondary constructs of the theory have been identified prior to conceptualizing a study? Monitoring the ongoing work with RIASEC theory will be challenging in the future.
7. **Myths and Critics.** Reardon and Lenz (2015) identified 12 myths that have clouded the TR&P integration of Holland's RIASEC theory. Indeed, such myths were also a concern for Holland because they misrepresented the theory and evidence and also presented a challenge to moving forward (e.g., the sex bias controversy). One critic, after hearing Holland's Division 17 talk at an APA Convention about the SDS, "A Theory-Ridden, Computerless, Impersonal Guidance System" (Holland, 1971), was asked if his journal would publish it. "No," he said, "It's just another gimmick." Holland revealed that such experiences helped formulate his paranoia about journal editors, or at least some editors.

Holland (2004) noted that the typology attracted a wide range of criticism for being simplistic, ignoring developmental theory, having questionable origins based largely on male data, and for being authored by a privileged European-American male who relied on old fashioned logical positivism. Dealing successfully with the challenges from critics was an ongoing theme of Holland's work with his theory.

8. **Sustainability.** The current scene for new faculty in contemporary research universities includes teaching and administrative responsibilities

along with an expectation that they pursue grants and publish early and vigorously in their careers. Given these circumstances, can work like Holland's be sustained? This situation can hinder faculty's long term focus on theory-based research and practice where results may take years to materialize. These circumstances stand in contrast to Holland's work with TR&P, which was not encumbered by grant funding agencies or heavy institutional oversight (Holland, 2004).

9. **Training.** Holland lamented the quality of training for practitioners on using the theory and the SDS. He viewed this as an important challenge in integrating TR&P;

My negative impression of some current training and practice includes the failure to inculcate critical thinking about research reports, practical interventions, as well as unsupported theory and speculation. At the core of this uncritical acceptance of ideas or flawed reports, is the failure to appreciate the difference between fantasy and evidence. The decline in critical thinking has been accompanied by a decline in the quality of diagnostic skills in the use of interest inventories. I am most familiar with counselor's use of the SDS. In general, many use the SDS like a cookie cutter. They note the three-letter code and assume there is nothing else of value. At the other extreme, some practitioners use the SDS like a projective device and find 'support' for many creative interpretations instead of relying on more obvious and empirically supportable interpretations. (Holland, 2004, p. 89)

Holland believed this deficiency in training hindered the integration of TR&P.

10. **Contemporary Presentations.** Several years ago a presenter at an NCDA conference program proclaimed that Holland had been "dethroned" and concluded that his work was no longer relevant. Reardon and Lenz (2015) found that the 2014 National Career Development Conference Program included 198 programs, but only three had any mention of RIASEC theory or the SDS, 1.5% of the programs listed. A key

word search of the 2014 American Psychological Association Conference Program found no hits for RIASEC, Holland, Self-Directed Search (SDS), or other related terms. A similar search of the 2014 American Counseling Association Conference Program revealed no hits for these terms. This situation illustrates a troubling irony—RIASEC is a widely used career theory with evidence-based tools that purport to help people make career decisions, but it is not often discussed at our professional meetings.

The challenges listed in this section lead to the next chapter section and Holland's views for integrating TR&P, in effect reframing the *challenges* to *opportunities*.

Opportunities for Integrating Theory, Research, and Practice

The integration of TR&P in response to challenges illustrates how a good theory is not static but changes as needed over time. For Holland, this was a lifelong pursuit.

1. **Theory Unprotected.** Holland's theory and the hexagon have become iconic in vocational psychology worldwide. RIASEC theory has had an unprecedented impact on both research and practice in counseling and career development, both for educational institutions and other organizations. It is no small irony that eight years after his death, Holland's theory and ideas remain robust and pervasive. The theory did not die. Indeed, the fact that Holland's publisher continues to improve and support instruments related to the theory such as the SDS and Occupations Finder bodes well for the theory's continued relevance and its ongoing use by scholars and practitioners.
2. **Instruments Protected.** Although many instruments now claim a basis in and relevance to RIASEC theory, only the tools published by PAR, Inc. were authored by John Holland. Although RIASEC codes are produced by other instruments, only the SDS has Holland's imprint or authorship. The fact that the publisher has chosen to maintain the integrity of Holland's original work is noteworthy and not always found

in the case of other deceased authors or theorists. In order to help researchers and practitioners defray some of the instrument costs, PAR, Inc. has instituted a program for funding research proposals and product discounts for student research and practitioner training.

3. **Theory Changes.** Holland's RIASEC theory took on the properties of a living social system as it grew and changed as the result of environmental changes and new information. Rather than acting as a static system, the theory was modified in ongoing attempts to improve its validity and efficacy. These changes, documented in the literature, have increased the opportunities to integrate TR&P in vocational psychology. Holland (1997, p. v) wrote in the preface to his last book: "This book is my sixth attempt to create a more satisfying theory of careers. I never seem to get it quite right." Rather than static and outdated, the theory is still evolving and developing. Opportunities remain for other scholars and practitioners to continue to "create a more satisfying theory of careers."
4. **Environmental Neglect.** Holland and Gottfredson addressed potential weaknesses in the theory's environmental aspect by developing two instruments for research and practice. They developed the Position Classification Inventory (PCI; Gottfredson & Holland, 1991) in order to apply the theory to the classification of work positions and occupations. The PCI consists of 84 items and can be completed and scored in fewer than 10 minutes. The items are organized according to activities, outlooks, personal style or values; skills/abilities/personal characteristics; abilities/skills/talents and frequency of activities; and personal characteristics.

In addition, Holland and Gottfredson developed the Environmental Identity Scale (EIS; Holland, 1997) also called the Organizational Focus Questionnaire) to tap into a worker's beliefs about the explicitness and consistency of an organization's goals, work rules, and rewards for performance. A high score means an environment provides clear and consistent direction and rewards. The environmental identity construct

was patterned after vocational identity, and future research could provide information about the usefulness of the scale in explaining person/job congruence with RIASEC theory. Reardon and Lenz (2015) described multiple ways the PCI and EIS could be used in research and practice, although only limited activity has been reported in the literature for either instrument. Further study of the typology's environmental aspects represents another opportunity for applying RIASEC theory in research and practice.

5. **Linking Theory and Interventions.** In some of Holland's later writing, such as *Making Vocational Choices* (Holland, 1997), he addressed this issue of theory informing practice by including new ideas on career interventions and providing career assistance. He described this as his most spontaneous writing in that book. For example, he introduced the concept of Personal Career Theory (PCT), which he characterized as personal characteristics related to occupational structures, as well as strategies for achieving work and nonwork aspirations that flow from one's experiences. When a PCT is weak or "fails," a person typically seeks outside career assistance, and a successful career intervention can help a person revise or implement a PCT.

Holland's (1974) earlier views on this matter suggested that most people did not require special assistance in solving career problems and he indicated that only "30 percent of the population (young and old) require . . . extensive services and remedies" (p. 12). Holland et al. (1994) noted that most students seeking career assistance expected reassurance about a choice already made and what occupation to follow rather than information about more options. This idea merits more research. Holland (1974) observed that the most effective interventions (e.g., "a cafeteria of services") should be tailored to meet individuals' needs. The essence of Holland's ideas about career intervention programs was that they should help connect individuals with the world of work, provide theory-based interventions, use the RIASEC classification for translating self-knowledge into options, and reduce the focus on career counseling by appointment.

Reardon and Lenz (2015) moved Holland's ideas about linking career theory to interventions a step forward in their *Handbook for Using the Self-Directed Search: Integrating RIASEC and CIP Theories in Practice*. Their demonstration of the integration and implementation of these two career theories is a unique contribution to the vocational behavior field.

6. **Massive Literature.** The literature on Holland's theory and its applications is vast. Holland (1997) updated the status of the theory and cited over 840 documents related to it in his last book. Foutch et al. (2014) used bibliographic research tools and created a researchable database from 1953–2011 with 1,970 literature citations in 275 publications. The RefShare website <http://www.refworks.com/refshare2?site=020751135918800000/RWWEB1061316284/012991109946687000> displays this database. Practitioners and scholars can use this resource to search for documents related to their interests and projects, further integrating TR&P. Most recently, Sargent and Kennelly (2016, May) updated the research by Foutch et al. (2014) and found 2,255 unique reference citations on Holland's work in 355 publications appearing between 1953–2015. Literature on RIASEC theory and applications opens opportunities for new research and improved practice.
7. **Myths and Critics.** Holland (2004, p. 86) noted that responding to critics was a challenge, but "Eventually, I learned it was more productive to focus on new research and promising theoretical revisions than to debate critics." One of the ways Holland responded to these myths and falsehoods was to set up "questions" as a foil for saying what he wanted about the theory and the SDS. The *SDS Professional User's Guide* (Holland, Powell, & Fritzsche, 1994) includes 39 such questions and answers which are especially informative and candid. He added, "I took most of these critical evaluations seriously and responded by thinking it over with friends, designing research to test a critical idea, making revisions in the theory or just worrying about

potential remedies” (Holland, 2004, p. 86).

The sex-bias controversy in the early 1970s illustrates Holland’s response to myths and critics. The dispute arose because some persons viewed the theory as limiting women’s career options. Holland’s response to this criticism was to perform an experimental evaluation of the effects of the SDS on high school students (Zener & Schnuelle, 1976). “Her [Zener’s] work led to more than 22 studies of the effects of the SDS on test-takers. I was relieved to learn that taking the SDS had positive effects for men and women” (Holland, 2004, p. 28). There is evidence that Holland’s initial response to critics was to stew about it, but he moved on to find research evidence to respond to critics with or to help improve the theory. Altogether, more evidence of his integration of TR&P.

8. **Sustainability.** Holland’s contributions may have occurred because of unique circumstances concerning his interests, skills, and the jobs he held over his lifetime. Those circumstances may not be replicable, and as a result, it may take a combination of contributors, including his publisher and persons integrating TR&P in vocational psychology and career development, to sustain Holland’s work in the future. Holland (1997, 2004) acknowledged scores of persons whose contributions enhanced his work, and most of them are now retired or no longer active in the field. I wonder what names will be listed in the next generation of researchers and practitioners pursuing Holland’s theory. Opportunities will exist for the next generation of those dedicated to Holland’s theory in research and practice. For example, Spokane, Moya, and Faris (2016) suggested that international attention to Holland’s theory may signal the value of vocational psychology in emerging economies and be a sign of new life for RIASEC theory.
9. **Training.** Holland noted that the American Counseling Association, National Career Development Association, and the American Psychological Association’s Division 17 (Counseling Psychology) were composed

primarily of Social types. It is reasonable to assume that these S types would welcome workshops and training events in a group setting. In addition, it is reasonable to assume that they would enjoy discussing SDS cases in a group setting. Faculty teaching the career information course or the assessment course in a master’s counseling program could employ such teaching techniques and obtain copies of the complete set of SDS 5th Edition Form R materials for each student. These materials, along with related Power Point slides, can be obtained from PAR for free or a reduced cost. The SDS is a Qualification Level A assessment, which means that no special qualifications, degrees, or training are required to us it.

10. **Contemporary Presentations.** A remedy for the dearth of presentations related to RIASEC theory at contemporary professional meetings will require some adjustments and new initiatives. Lent (2016) noted that many career theorists, researchers, and practitioners have A, I, and S in their Holland codes, indicating an overlap in their interests and activities. He suggested that the three groups may need to find a common language for communicating. Some theorists and researchers, for example, may need to speak “Social” in order to communicate with practitioners. A new initiative for a conference program committee could indicate that proposals integrating TR&P would receive higher ratings by reviewers. Travel grants supporting conference presenters could be awarded by publishers of instruments drawing upon RIASEC theory, and recipients of grants from the American Psychological Foundation Fund in Memory of John L. Holland could make presentations at APA meetings and elsewhere. These examples of adjustments and new initiatives might help overcome some of the inertia associated with RIASEC theory presentations.

Recommendations for the Future

In this section I offer some ways in which theorists, researchers, practitioners, professional associations, and policy makers can better cope with

challenges and maximize opportunities in integrating TR&P. I will draw upon Holland's ideas for doing this where possible, but I also want to follow the 60-30-10 goal for the content of research literature in career development identified by Sampson et al. (2014). This goal would involve rebalancing the topic content of literature in the field from 93% vocational behavior and 7% evidence-based practice to 60% vocational behavior and career theory, 30% evidence-based practice, and 10% public policy analysis and implementation of innovation, including descriptions of best practice.

Sustaining Theory Tools

Since Holland's death in 2008, PAR, Inc., his publisher, has revised selected instruments and applications of RIASEC theory. For example, new editions of the SDS and all of the accompanying materials were published in 2013, and new tools (e.g., *The Veterans and Military Occupations Finder*; Messer, Greene, & Holland, 2013) were created. R. Bob Smith III (2013, p. iii), chairman and CEO of PAR, wrote in the foreword to the *SDS Manual* (Holland & Messer, 2013), "PAR continues to feel honored to be the publisher of such an exceptional theorist and author." The fact that Holland's publisher has picked up the mantle for sustaining and enhancing the SDS is a powerful and positive sign for the future of RIASEC theory and its applications in research and practice.

Ongoing Research

Holland (1997) provided students (and others) with suggestions for future research in Appendix E of his last book. He created categories of studies related to types, environments, interactions, classifications, and special problems that included more than 60 researchable questions. He provided a list of his favorite research projects and strategies, including more work-history studies; examining the predictive values of vocational aspirations; reexamining coherence, profile consistency, and so forth.; more person-environment experiments; and studies of rare codes or flat profiles. Engaging in these research projects would enhance our knowledge of RIASEC theory and its applications for years to come.

Training

The SDS is one of the five most frequently taught assessments by counselor educators (Neukrug, Peterson, Bonner, & Lomas, 2013), and is also among the top three taught in the career area (SII, SDS, O*NET Interest Profiler). A second study of assessment use by practitioners, except those in school and mental health areas, revealed the SDS was the third most frequently used assessment (Peterson, Lomas, Neukrug, & Bonner, 2014).

The recent publication by Reardon and Lenz (2015), *Handbook for Using the Self-Directed Search: Integrating RIASEC and CIP Theories in Practice*, was written for practitioners to help them more fully appreciate John Holland as a person, the status of Holland's theory in contemporary career literature, and how the SDS and other assessments and resources could be used in practice and program development. They drew upon Holland's idea that vocational theory integration requires agreement about goals and that cognitive information processing theory (Sampson, Reardon, Peterson, & Lenz, 2004) was highly compatible with RIASEC theory in that regard.

Recognizing Limits

In contemplating the future for Holland's theory, I am reminded of his observation that he did not have the time, talent, or interest in doing everything well. "As I began working, I felt responsible for every facet of my research, but it didn't take long to realize that I needed help with writing for publication, statistical analyses, data collection, relevant literature, and so on" (Holland, 2004, p. 50). In thinking about the integration of TR&P and Holland's theory, it is likely that future efforts may not fully engage all three of these areas.

In this regard, Holland noted that "Theories have different audiences and goals. Some are oriented to practitioners: others are oriented to psychologists, sociologists, or other groups. It's hard to do both, for practitioners want help and psychologists want perfection or scientific respectability" (Holland, 1994, p. 46). Holland kept the focus of his work on TR&P, and this is consistent with the recommendation by Sampson et al. (2014).

Holland's "Theoretical Estate"

What happens to the integration of TR&P when the theorist dies? This is a significant challenge for the future of RIASEC theory. Holland was the creator, stimulus, critic, manager, chronicler, and shepherd of this theory. Are there individuals or groups that can move into the theoretical estate he left and fill such a role? There is presently no university institute or center that could execute systematic research or develop training materials focused on Holland's theory. Perhaps Holland was so unique in his vision, dedication, and productivity that no individual or group can take his place. Time will tell us what future developments will occur in the TR&P of RIASEC.

A Personal Reflection

Thinking back to 1968 and Holland's talk at FSU, I remember it vividly and being quite energized to learn more about his ideas and how to implement them. His career service delivery scheme was the antithesis of what we were doing in our counseling center. If I could turn back the clock 50 years but also move forward to the present, I would take away two important things. First, I would understand that at age 25 I could build my career on the TR&P of RIASEC following the path that Holland blazed. Second, I would know that such a career would include professional success, positive relationships, and the provision of vocational assistance to thousands of people worldwide. Holland did this, and my hope is that others will be inspired to do the same.

Summary

As suggested by someone who knew him well, this paper has used varied media to channel John Holland's ideas about his TR&P. The tools for constructing this paper involved reading, listening to, and viewing Holland's words, along with some limited editorial infusion of my own ideas. Holland's contributions over a half century are the epitome of integrating TR&P in vocational psychology. In constructing this paper, I considered the relevance of such integration, its challenges and opportunities, as well as recommendations for the future.

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