

**Occupational Information Development Advisory Panel
Teleconference Meeting Minutes**

August 31, 2009

This document contains the minutes for the teleconference meeting of the Occupational Information Development Advisory Panel (the “Panel”). This discretionary Panel, established under the Federal Advisory Committee Act of 1972, as amended (hereinafter referred to as “the FACA”), will report to the Commissioner of the Social Security. The Panel will provide independent advice and recommendations on plans and activities to replace the Dictionary of Occupational Titles used in the Social Security Administration’s disability determination process. The Panel will advise the agency on creating an occupational information system tailored specifically for SSA’s disability programs and adjudicative needs. The Panel will provide advice and recommendations related to the SSA’s disability programs in the following areas: medical and vocational analysis of disability claims; occupational analysis, including definitions, ratings, and capture of physical and mental/cognitive demands of work, and other occupational information critical to SSA’s disability programs; data collection; use of occupational information in SSA’s disability programs; and any other area(s) that would enable SSA to develop an occupational information system suited to its disability programs and improve the medical-vocational adjudication policies and processes.

Panel Members Present (and confirmed by polling of the Designated Federal Officer):

Gunnar B. J. Anderson, Ph.D.
Mary Barros-Bailey, Ph.D.—*Interim Chair*
Robert T. Fraser, Ph.D.
Shanan Gwaltney Gibson, Ph.D.
Thomas A. Hardy, J.D.
Sylvia E. Karman
Lynnae M. Ruttledge
David J. Schretlen, Ph.D.
Nancy G. Shor, J.D.
Mark A. Wilson, Ph.D.

Call to Order:

After confirming a quorum of members, Debra Tidwell-Peters, the Designated Federal Officer, called the meeting to order and recognized the Panel’s Interim Chair, Dr. Mary Barros-Bailey.

Dr. Barros-Bailey gave a brief introduction to the Panel members and public audience present on the call and moved to the status reports on the work and development of the subcommittee's recommendations. The draft subcommittee recommendations are included in Attachment 1.

User Needs and Relations Subcommittee (UN&R)

Sylvia E. Karman—Subcommittee Chair

Ms. Karman's report focused on the recommendations under development by the UN&R subcommittee in three main areas: communication and the exchange of information for the Panel and SSA about the project; applied research and the performance of user needs analyses throughout the research and development phase of the project; and, the consideration of additional content model data elements. Ms. Karman addressed each recommendation accordingly by section. Upon request from Ms. Rutledge, Ms. Karman concluded by identifying the members of the UN&R subcommittee.

Work Taxonomy and Classification Subcommittee

Mark A. Wilson, Ph.D.—Subcommittee Chair

Dr. Wilson's subcommittee report began by introducing the members of the subcommittee. Dr. Wilson presented a total of 16 recommendations in four categories: (1) Existing Systems; (2) OIS Design and Development; (3) Data Collection and Analysis; and, (4) OIS Maintenance. There were two issues of major concern. Under the category of OIS Design and Development, Panel members debated using the term "measurable" versus "observable" concluding that each term captured a different element of the measurement constructs. The second issue was OIS Data Collection and Analysis. Dr. Wilson suggested that a pilot study be conducted using data derived from information made available by SSA. He also stated that eventually the pilot study could lead to the creation of a pilot sample of jobs. Panel members discussed the usefulness of collaborating with the Bureau of Labor Statistics and collecting information about job titles. Dr. Wilson ended by suggesting that the work taxonomy created by SSA will eventually be useful for the Department of Labor occupational classification scheme.

Physical Demands Committee

Deborah E. Lechner.—Subcommittee Chair

Ms. Lechner's subcommittee report began by introducing the members of the subcommittee. Ms. Lechner provided a brief recap of the different occasions when the subcommittee has met, the various sources of input for consideration, and the number of papers and external references reviewed. The subcommittee made recommendations regarding the categories of manual materials and handling strength, sensory considerations, and environmental considerations.

Transferable Skills Analysis Subcommittee (TSA)

Thomas A. Hardy, J.D.—Subcommittee Chair

Mr. Hardy began the subcommittee report by introducing members of the TSA subcommittee. Mr. Hardy provided both general and overall recommendations in reference to SSA and the development of the occupational information system and category-specific recommendations. The more specific recommendations addressed the categories of the content model and data needing to be developed.

Mental/Cognitive Demands Subcommittee

David J. Schretlen, Ph.D.—Subcommittee Chair

Dr. Schretlen began by providing the names of the subcommittee members. Dr. Schretlen submitted a total of five recommendations that addressed issues concerning the conceptual model of psychological abilities and the Mental Residual Functional Capacity.

Panel Discussion

Mary Barros-Bailey, Interim Panel Chair

Dr. Barros-Bailey began by announcing that the subcommittees should provide a draft report by the close of business on Tuesday, September 1, 2009, and that the goal was the completion of the draft recommendations report by September 4, 2009. The subcommittee reports, in their entirety, will be included as appendices to the overall report submitted to the Commissioner on September 30, 2009. Dr. Barros-Bailey also stated that the draft report would be available to the Panel for review prior to the final deliberation and Panel vote during the Los Angeles meeting.

Administrative Business

Mary Barros-Bailey, Interim Panel Chair

Dr. Barros-Bailey reviewed the voting procedures that the Panel would use to identify the final recommendations for submission to SSA and stating the Panel would receive more detailed information prior, and during, the meeting in Los Angeles.

Meeting Adjournment:

The meeting adjourned at 3:07 p.m. (EDT).

Certification

I, Debra Tidwell-Peters, Designated Federal Officer for the Occupational Information development Advisory Panel, hereby certify that the above minutes accurately describe the Teleconference Meeting of the Panel held on August 31, 2009, at the Social Security Administration, 6401 Security Boulevard Woodlawn, MD 21235.



Debra Tidwell-Peters
Designated Federal Officer

Attachment 1

Draft Subcommittee Recommendations

User Needs and Relations Subcommittee Content Model and Classification Recommendations to the Occupational Information Development Advisory Panel

Recommendations for Communication

1. Public Comment Process

We submit the following recommendations for the Panel's consideration:

1a. SSA should explore more extensive use of *Federal Register* notices to solicit public comments. We offer two possible options for consideration:

--SSA should investigate the protocol and feasibility of publishing the Panel's recommendations in the *Federal Register*, inviting the public to comment for a designated period.

--SSA should publish *Federal Register* notices independently of Panel meeting announcements. The notices could request public comment regarding specific topics of timely interest to the Panel or SSA that may inform Panel deliberations and meeting agendas, as well as SSA's OIS project work.

1b. SSA should notify the public periodically (as determined by the Panel) of the nature of the public comments received between and during Panel meetings. SSA should summarize the comments and make the summaries available to the public. They may be posted to the OIDAP website, disseminated at face-to-face public Panel meetings, and broadcast to subscribers of OIDAP email. Comments received in response to a *Federal Register* notice may be summarized and published through the *Federal Register*.

2. Communication Methods and Venues

We submit the following recommendations for the Panel's consideration regarding ways to solicit input, to inform users and others about the Panel and SSA missions and activities, and to provide a platform for unsolicited input and an open exchange of ideas:

- 2a. Publish notices in relevant professional publications advertising the OIDAP website and email addresses.
- 2b. Explore social media, yet tread lightly and thoughtfully. Of all social media currently available, a closed authored blog may be the best contemporary method to reach a variety of audiences with information about the Panel's activities and help engage public consideration on a variety of issues pertinent to the Panel's work.
- 2c. Maintain basic static/receptive media
- OIDAP e-mail
 - Website that serves as the Panel's virtual billboard but is not interactive
- 2d. Push media
- E-mail distribution list
 - Public service announcements through SSA that has its own distribution list
- 2e. Develop consistent structure for any online social media use
- Develop a "branding" style
 - Develop a style sheet for all print media to help brand the project and the Panel.
 - Develop presentation materials and powerpoint slides regarding the project and Panel activities that can be modified to suit audience needs.
 - Develop criteria for moderators of social media sources regarding content, clearance, style, and online behavior
 - Help set expectations and boundaries with disclosure statements notifying participants regarding authoring, anonymity, expected response, behavior, etc.
- 2f. Monitor developments in new and emerging public media through ongoing SSA and Federal government efforts, including
- SSA's Future Systems Technology Advisory Panel (<http://www.socialsecurity.gov/fstap/>)
 - The Federal Knowledge Management Initiative (Jeanne Holm, Federal KM Working Group, 818.354.8282)
- 2g. Develop FAQ sheets for the public to address Frequently Asked Questions regarding OIS project and Panel activities.

Recommendations for Applied Research

3. User Needs Analyses and Studies of Program and Process Effects

We submit the following recommendations for the Panel's consideration:

3a. SSA should develop a formal plan to conduct UNA's throughout the R&D phase of the OIS project.

--The UNA plans and study designs should address various stages of OIS development (e.g., Content Model and instrument development) to capture user reactions and concerns, including operational and programmatic information.

--The UNA's should target as many SSA users as possible, as well as external users of occupational information who are directly involved in SSA's disability process (e.g., claimant representatives, vocational experts). We understand that the OMB Paperwork Reduction Act guidelines would apply for any studies or surveys that SSA conducts with external users.

3b. SSA should study the effects of using OIS Content Model data elements

-- SSA should conduct a study of the effects of the OIS Content Model data elements in SSA's disability process by comparing the use of prototype person-side instruments which include newly identified OIS Content Model person-side constructs and measures with the use of the current physical and mental residual functional (RFC) assessments using a sample of disability claims that have already been adjudicated. The results would inform SSA's RFC development, the claims intake process, other assessment models (e.g., computer assisted technology), as well as the Content Model and the prototype work-side job analysis instruments. The study should involve SSA adjudicators and medical staff applying the new Content Model's physical and mental data elements.

--When the results of the field tests of the work-side instruments are available, SSA should conduct studies of the application of these data in SSA's disability process to assess the validity and effects of the data on both its disability process and programs. These studies would include effects of using physical and mental work demands data, as well as work activity and other occupational data critical to work history and transferable skills assessment.

Recommendations for Other Content Model Data Elements

In addition to data regarding the physical and mental-cognitive demands of work and worker traits, SSA needs other types of occupational information for disability adjudication.

We recognize that it might also be beneficial for SSA to collect occupational information solely for program evaluation and research purposes. In fact, these data elements might serve not only SSA in its long-term oversight and evaluation of its disability programs, but the data elements may also serve external users in the research and academic arenas.

4. Other Content Model Data Elements—For Adjudicative Use

We submit the following recommendations for the Panel's consideration regarding additional OIS Content Model data elements that may be helpful for disability adjudication:

- Literacy (Does the occupation require the worker to be able to read or write? If so, in what language(s)?)
- Communication in English or other languages (Does the occupation require the worker to be able to communicate in English? Other language(s)?)
- Options for how work is performed (e.g., sit-stand option), including options for use of tools or technology to perform work activity
- Core tasks (or work activities)

5. Other Content Model Data Elements—For Program Evaluation and Research Only

We submit the following recommendations for the Panel's consideration regarding additional OIS Content Model data elements for program evaluation and research¹:

- Worker's year of birth
- Worker's educational attainment
- Worker's chronological work experience (e.g., last occupation or up to the last three occupations, including duration, work activities performed)
- Worker's mode of transportation to the occupation
- Zipcode of employment entity and of worker's residence
- Worker's primary language and secondary, if any
- Occupation's average shift(s) (Time of day and number of hours)
- Worker: number of hours worked weekly or daily in occupation
- Worker: other jobs or occupations worked simultaneously (Is worker holding down more than one job at once)
- Does employer offer health insurance? If yes, does worker participate in that program?
- Worker's gender
- Worker's race and ethnicity²

¹ All of the recommended OIS Content Model data elements for program evaluation and research must be collected according to the Health Information Portability and Accountability Act guidelines to protect Personally Identifiable Information.

² Pursuant to the OMB government-wide standards for Federal agencies collecting race and ethnicity data (62 *Federal Register* (FR) 58782, October 30, 1997, "Revisions to the Standards for Classification of Federal Data on Race and Ethnicity"). See also SSA's notice of a proposed system of records, Race and Ethnicity Collection System, 74 *FR* 41962, August 19, 2009.

RECOMMENDATIONS OF THE TRANSFERABILITY OF SKILLS ANALYSIS SUBCOMMITTEE

We recommend that:

- SSA develop the OIS in such a way that the inference necessary to apply its data is reduced to the greatest extent practical.
- SSA develop the OIS in such a way that the degree of overlap or redundancy between data elements and between ratings of data elements be reduced to the greatest extent practical
- SSA conduct validation studies on the occupational information it collects regarding the data elements that the TSA subcommittee recommends in this report to determine, first of all, whether the data that have been captured are the data that were intended to be captured and, second, whether the data that have been captured fulfills the function and need described in this report.
- For content model and data development purposes, SSA use work activities as an observable and measurable data element as a proxy for skill.
- SSA validate and study the work activity data it collects to determine 1) which of the work activities when combined with other requirements of the occupation may rise to a level appropriate to be called a “skill,”^[1] and 2) what continuum of “skill” level may be appropriate for SSA’s application of these OIS data in its disability adjudication process.
- SSA develop a method for determining the complexity level of the occupation **and** the individual work activities.
- SSA develop a method to identify the time to proficiency for satisfactory performance of an occupation. .
- .SSA explore methods for developing a rating scale for the length of viability of the occupation based on its component work activities.
- SSA develop work context factors for the OIS, such as the industry, work settings, tools, machines, technologies, raw materials, products, subject matter, processes, and services related to the occupation.

Recommendations of the Work Taxonomy and Classification Subcommittee

Existing Systems

- *Recommendation:* No effort or resources should be devoted to updating the DOT for use by SSA in the disability determination process.
- *Recommendation:* No effort or resources should be devoted to updating the O*NET for use by SSA in the disability determination process, or for trying to develop methods for using O*NET data to estimate DOT-type constructs (e.g., SVP, Strength).

OIS Design and Development

- *Recommendation:* A new OIS should be developed based on the work-activity taxonomic dimensions listed in Table 2. More specifically, the dimensions listed in Table 2 should serve as the stimulus for the development of multi-item scales meant to measure each dimension listed in Table 2.
- *Recommendation:* The SSA should host a web based community where registered vocational experts from several different disciplines can review the dimensions listed in Table 2, suggest potential items for inclusion, comment on suggestions from others, and on any proposed work measurement instrument as it becomes finalized. Two primary criteria for items should be that they are both behavioral and observable. This community should be maintained after the OIS has been established to identify new items or scales that need to be added as the world of work changes.
- *Recommendation:* Because there is so little expertise currently available and because of the unique nature of the OIS needs of SSA, the agency should develop its own internal unit devoted to OIS Design and Development, OIS Data Collection & Analysis, and OIS Maintenance to integrate suggestions from the web based community, provide their own suggestions for OIS item development, and advise it on the numerous technical matters related to OIS utilization. The use of occupational information for disability determination purposes is a core task of the agency. SSA will need to develop expertise internally to carry out this core task as it collects and analyzes information about work that has never before existed on the scale needed by SSA. Because of the changing nature of work and the need for keeping the OIS accurate there will be ongoing need for expertise in these areas. The agency will need to put procedures and policies in place to establish the independence and scientific credibility of this unit.

OIS Data Collection & Analysis

- *Recommendation:* Once multi-item scales have been identified for each dimension listed in Table 2 that SSA considers relevant for its purposes, SSA should conduct a pilot study involving the most frequently seen jobs of claimants and the most frequently recommended jobs for those with residual functional capacity. This pilot study should capture at least 95% of the most frequently seen and recommended jobs and should scale each item in terms of both frequency of occurrence on the job and duration of performance.
- *Recommendation:* The SSA should train existing Vocational Experts in the new OIS and use them as a source to provide job level data for the pilot study. The SSA should also provide job incumbents with the opportunity to provide job level data in the pilot study and compare the quality of results from the two sources. As part of this study, a further examination of the performance and suitability of direct holistic ratings of abstract work characteristics should be included. Although past research has strongly suggested that holistic ratings cannot provide data of adequate reliability, validity, and accuracy, it is nevertheless important to further establish the correctness of this conclusion with respect

to the specific types of data collection instruments SSA will use to collect the new OIS (both on the job- and person-side of the OIS content model).

- Recommendation: The SSA should evaluate the pilot study data for utility (does it provide the information needed by the users in the system), reliability (inter-rater), and validity (confirmation of job descriptions generated by the OIS through direct observation, and convergence with “known true” ratings profiles).
- Recommendation: The SSA should use the pilot data to generate prototype occupational analysis reports and computerized systems to access the information for the purposes of usability analysis.
- *Recommendation:* The SSA should host a web based community where registered users will be provided access to the occupational analysis data collected by SSA for scientific research purposes. The hope is to encourage the development of an independent scientific community devoted to understanding occupational analysis issues using a common metric of description. Not only will this allow for independent verification of SSA internal studies but it will most likely result in the development of a number of applications that have nothing to do with disability determination.
- *Recommendation:* The SSA should use the results of the pilot study to refine the items and work taxonomy using existing psychometric principles prior to launching a data collection effort targeted at capturing all work in the economy.
- *Recommendation:* The SSA should develop a plan to sample work from all jobs in the economy. There does not seem to be any easy means to identify what a sample that included all jobs would include. Perhaps the best source to begin the development of the sample would be the 12000+ titles listed in the DOT. Both research and vocational expert online communities should be provided with the initial list for purposes of suggesting additions and deletions from the list. The data from the operational OIS should be subjected to the same type of evaluation criteria as the pilot study. The data from the operational OIS, like the pilot study data, should be shared with the scientific community via the web based community.
- *Recommendation:* Once a large database representative of all work in the economy has been obtained, the SSA should examine various methods of job classification based on the common metric of descriptors employed in the new system. By basing job classification on a common metric of descriptors the agency will avoid the inaccuracy problems associated with job classification systems based on job titles.

OIS Maintenance

- *Recommendation:* The SSA should host a web based community where registered users can comment on the quality and accuracy of the operational OIS data. The idea is that vocational experts are most likely to identify when information has become dated and needs to be updated.
- *Recommendation:* The SSA should regularly and randomly select jobs in the operational OIS for audits to insure that they remain up-to-date and establish an “expiration date” for job level descriptions.
- *Recommendation:* The SSA should periodically review the OIS for items that may no longer be useful and for the absence of items that may be needed. This process will be useful in identifying changes in work content not reflected in the existing items that may be emerging in the economy.

Physical Demands Subcommittee
Content Model and Classification Recommendations

Manual Materials Handling/Strength

Recommendation: Create more categories that are not as broad. Perhaps a system that increases by smaller weight increments may provide a solution. However, once the data is gathered and analyzed, future recommendations could suggest a scale that is more applicable than what users presently have.

Postures and Positions, Mobility and Movement Psychomotor

- 1) *We recommend that SSA should develop a system that distinguishes between Above v. below-waist lifting.*
- 2) *We recommend that reaching be subcategorized into three different heights a) Above shoulder; b) Shoulder to waist height; and, c) Below waist. In addition, the reaching required should be designated as either one-handed or two-handed reaching as noted below.*
- 3) *We recommend the addition of keyboarding and use of mouse/touchpad functions.*
- 4) *We recommend updated descriptions to address gripping and forceful pinching.*
- 5) *We recommend the documenting of uni- and bi-lateral requirements of occupations.*
- 6) *We recommend the addition of descriptors for trunk (body) rotation/twisting.*
- 7) *We recommend the addition of descriptors for neck rotation/twisting and bending.*
- 8) *We recommend the addition of descriptors for forward bending from a sitting position.*
- 9) *We recommend Increased specificity be added for climbing.*
- 10) *We recommend the addition of running as a physical requirement.*
- 11) *We recommend the expansion of categories for balance.*
- 12) *We recommend a separate classification of Sitting, Standing, and Walking.*
- 13) *We recommend the addition of jobs for which a sit-stand option is possible.*
- 14) *We recommend the notation of occupations that allow the use of use assistive devices.*
- 15) *We recommend the addition of documentation for the operation of foot controls (e.g., Documentation of whether one or two feet are required.)*
- 16) *We recommend the addition of descriptors for the repetitive twisting of wrist.*

- 17) *We recommend the addition of descriptors for handwriting.*

RATING SYSTEMS

Repetition:

Recommendation: we recommend a thorough analysis of the literature on repetitive work so as to determine the most appropriate classification system for repetition.

Duration: Several groups have mentioned that a scale for duration for physical demands is very important. However, most feel that the current categories of Never, Occasional (1-33% of the day), Frequent 34 – 66% of the day, and Constant > 66% of the day, are too broad. Most user needs groups and individuals requested a seldom or rarely category and IARP requested that the OIS classify jobs that require more than an 8-hour day. The length of time a physical demand is performed and the length of a workday should be captured in the data gathering process. Once the data is analyzed, future recommendations could address how best to address this issue.

Maximum continuous duration. In addition to the issue of total duration throughout the day, the maximum continuous duration a position or other physical demand must be performed is important as well. For example, a physical demand may occur Occasionally (up to 1/3 of the day) and in one occupation the demand would be interspersed intermittently throughout the day. In another occupation, this 2.7 hours of activity would occur continuously. Many claimants can tolerate activity if the physical demand is required intermittently but not if it is required continuously for 2.7 hours.

Maximum continuous distance: For dynamic movements such as carry, push, pull, walk, climb, run, crawl, etc., the maximum continuous distance can be a very important occupational demand. If an claimant can only walk 50 continuous feet and the occupation requires at least 500 feet of continuous walking, then there is an obvious mismatch between claimant and former occupation. The challenge is that each job that is analyzed in an occupation may vary considerably when it comes to these distances based on the size of the physical location.

Variations of Physical Demands within Occupations: Each occupation will be studied by observing and measuring physical demands in multiple representative jobs. Most certainly there will be a range of demands for each occupation. Even if demands are similar, the extent to which these demands are required will vary. The occupational classification will identify the worst case scenario in individual job analyses that will then be used to determine a mean for each occupation.

Sensory/Motor

- Defining talking within the physical demands context in terms of speech quality rather than the receptive or expressive qualities that are more of the mental/cognitive process.
- Consider more discrete, appropriate, and functional levels of measurement for feeling, vision, and hearing.
- Although not frequently encountered as an impairment consideration, including taste and smell sensory demands due to their relevance as essential and core functions of a variety of occupations.

Environmental

Recommendations:

- 1) Describe and define environmental conditions as they relate to: heat and cold, humidity, wetness (moisture, rain, water), dust, chemicals, fumes, gases, smoke, mold or mildew, fibers including asbestos, vibration and general conditions of the workplace (hazardous environment, heights, noise, animals, etc.).
- 2) Define appropriate measures for each condition where possible (e.g., for noise and vibration issues provide details of the level and time of exposure) or, at a minimum, include descriptions of levels of exposure, concentration or severity, frequency and accommodations available to address the effects of the exposure (such as protective equipment).

Mental Cognitive Subcommittee Recommendations
to the
Occupational Information Development Advisory Panel

Based on a review of the scientific literature, presentations by staff members from the SSA, DDS, and various professional organizations to the Subcommittee and OIDAP, presentations by OIDAP Subcommittee panelists, input from experts who participated in the Chicago Roundtable, interviews of DDS staff, and internal discussions, the Mental Cognitive Subcommittee reached several conclusions that it deems relevant to the development of a new Occupational Information System. These conclusions and the recommendations to which they lead are outlined below.

Recommendation 1: The conceptual model of psychological abilities required to do work, as reflected by the current MRFC assessment, should be revised. The revised model should: (i) redress shortcomings of SSA's current conceptual model of the psychological abilities required to do work, (ii) be based on sound scientific evidence where possible, (iii) lead logically to elements that can be reliably assessed and empirically tested for predictive validity, and (iv) retain elements of the current MRFC assessment that are consistent with scientific evidence, reliably measurable, and valid predictors of the ability to work, as this will provide continuity with the existing system.

As documented in previous sections, it is widely recognized both within and outside of the SSA that the current MRFC assessment is based on a simplistic conceptual model of the psychological abilities that are required to do work. Much of the language that appears in Form SSA-4734-F4-SUP was drawn directly from the *Dictionary of Occupational Titles* (DOT) in response to the need for an instrument to complement the physical RFC assessment. However, the MRFC was never subjected to rigorous study to verify its reliability and predictive validity of the elements that comprise it.

Recommendation 1a: Any revision of the current MRFC assessment should redress the following shortcomings: (1) the underrepresentation of neurocognitive abilities, (2) the reliance on coarse and underspecified categories to rate residual abilities, (3) the failure to account for longitudinal fluctuations in mental abilities, (4) the inclusion of elements that combine disparate abilities, (5) the failure to recognize differences in the predictive power of various abilities, and (6) the large inferential leaps required to match residual abilities with job demands. Studies of work outcome among persons with mental disorders typically regress work outcomes (e.g., employment, work performance, job loss) on multiple predictors, such as demographic variables, clinical characteristics, and measures of cognitive or social functioning. While hundreds of such studies have been published, the Subcommittee found none that examined the accuracy with which a broad set of psychological abilities predicts whether individuals with mental disorders can work and what occupational demands they can meet, *independent*

of their demographic background and clinical symptoms. These are the questions that the SSA must answer to adjudicate disability claims. However, research has shown that neurocognitive test performance strongly predicts whether persons with many different mental disorders, neurological conditions, and medical diseases can work.

Given evidence that neurocognitive functioning predicts work outcomes among persons with mental and physical disorders, the Subcommittee reviewed factor analytic studies that have examined the underlying, latent structure of cognition. The aim was to develop a parsimonious list of abilities that the SSA might use to link with occupational demands that will be described by the new OIS. Many different factor structures have been found by previous studies involving healthy and mentally disordered samples. Consequently, previous research has not yielded a single, broadly replicated factor structure to guide the Subcommittee's recommendations. On the other hand, the same research provides scientific support for several alternate models of cognitive architecture. This affords the Subcommittee and the SSA some latitude in deciding how to balance parsimony with specificity in choosing the conceptual model that will drive instrument development.

Recommendation 1b: The SSA should include aspects of neurocognitive functioning in a revised conceptual model of MRFC. This recommendation responds to the perceived failure of the current MRFC assessment to account for impairments of specific cognitive abilities. These can result from traumatic brain injury, other acquired brain disorders, developmental disorders that cause cognitive deficits without mental retardation, and various psychiatric and medical conditions in which other symptoms are primary but that also involve cognitive morbidity, such as schizophrenia. Inadequate assessment of neurocognitive impairments was noted as a shortcoming of the current MRFC assessment by every group from which the Subcommittee obtained input. Including neurocognitive abilities in a revised MRFC assessment could greatly improve SSA's ability to identify under-recognized impairment-related limitations that preclude the ability to do work.

The most parsimonious approach would be to assess general cognitive ability ("g"), which can be reliably measured and expressed with a single number. Numerous studies show that *g* predicts the ability to do work. Further, when job incumbents are compared, they show sizable differences on tests of *g* corresponding to differences in job complexity. However, tests of *g* are less sensitive to the deleterious effects of mental disorders than tests of some other cognitive abilities whose impairment can also limit a person's ability to work. Also, empirical research might show that another aspect of cognitive functioning predicts the ability to do work better than *g*. For these reasons, the Subcommittee recommends that the SSA adopt a multi-dimensional model of cognitive functioning for a revised MRFC assessment. While the provisional "core mental residual functional capacities" (see below) incorporate a six-factor model

of neurocognitive functioning, the Subcommittee recognizes that alternate models with fewer or different factors might provide a more efficient assessment with little loss of predictive validity.

Regardless of the number and specific cognitive abilities that SSA ultimately decides to include in a revised MRFC assessment, it will be important to empirically study and eliminate any adverse disparate impact that assessing cognitive functioning could have on specific subgroups of persons applying for disability benefits, such as women, older adults, and racial or ethnic minorities. Because human behavior is multiply-determined, it is impossible to parse psychological abilities that are essential for work into completely orthogonal dimensions. For example, the ability to focus on a task likely reflects not only an underlying trait-like attentional capacity, but also such state-like influences as wakefulness, medication side-effects, the nature of ambient distractions, the presence of intrusive thoughts, etc. Nevertheless, the Subcommittee concluded that it is useful to group abilities that are essential for work into broad categories that are *relatively* independent. The SSA's current assessment of MRFC organizes abilities into four broad categories: (1) understanding and memory, (2) sustained concentration and persistence, (3) social interaction, and (4) adaptation. Various users (e.g., DDS medical consultants) and Roundtable participants agreed that the existing organization is imperfect but workable. The Subcommittee decided to recommend revising, rather than discarding, this organization, as described below.

Recommendation 2: The Subcommittee recommends that the SSA reorganize the elements of its MRFC into the following four categories: (1) neurocognitive functioning, (2) initiative and persistence, (3) interpersonal functioning, and (4) self-management. This revised conceptualization of MRFC elements provides greater homogeneity of within-category elements and clearer between-category distinctions of MRFC content than the organization implied by Form SSA-4734-F4-SUP.

Recommendation 3: The Subcommittee recommends that SSA adopt the psychological abilities shown under each category in the outline below entitled "Core Mental Residual Functional Capacities." The 15 abilities specified in this outline provide a comprehensive but parsimonious assessment of the four major categories of psychological functioning required to do work. However, the Subcommittee recognizes that the SSA might choose to discard or replace some of these 15 abilities, or add others that are not listed below. Therefore, a brief explanation of why each element of the proposed MRFC assessment was included and worded as shown is presented below. We also identify other abilities that the Subcommittee considered but excluded from the proposed outline, and explain the reasoning that led to each decision.

Core Mental Residual Functional Capacities

Psychological residual functional capacities are conceptualized under four major categories of functioning. Following each specific ability outlined below is a statement intended to elaborate its meaning in greater detail.

(A) Neurocognitive functioning

1. General cognitive/intellectual ability (how well a person can reason, solve problems, and meet cognitive demands of varied complexity)
2. Language & communication (how well a person can understand spoken or written language, communicate his or her thoughts, and follow directions)
3. Memory acquisition (how well a person can learn and remember new information, such as a list of words, instructions, or procedures)
4. Attention & distractibility (how well a person can sustain the focus of attention in a work environment with ordinary distractions)
5. Processing speed (how quickly a person can respond to questions and process information)
6. Executive functioning (how well a person can plan, prioritize, organize, sequence, initiate, and execute multi-step procedures)

(B) Initiative & persistence

7. Attendance/Punctuality (how consistently a person can leave his/her residence and maintain regular attendance and punctuality)
8. Initiative (whether a person can start and perform tasks once they are explained without an unusual level of supervision)
9. Pace/Persistence (whether a person can continue performing understood tasks at an acceptable pace for a normal work week without excessive breaks)

(C) Interpersonal functioning

10. Cooperation (the extent to which a person's interactions with others are free of irritability, argumentativeness, sensitivity, or suspiciousness)
11. Response to criticism (how well a person responds to criticism, instruction, and challenges)
12. Social cognition (whether a person can navigate social interactions well enough to respond appropriately to social cues, state his or her point of view, and ask for help when needed)

(D) Self-management

13. Personal hygiene (how well a person maintains an acceptable level of personal cleanliness and socially appropriate attire)
14. Symptom control (how well a person inhibits disturbing behaviors, such as loud speech, mood swings, or responding to hallucinations)
15. Self-monitoring (how well a person can distinguish between acceptable and unacceptable work performance)

Under the first category, neurocognitive functioning, the Subcommittee recommends that the SSA adopt a six-factor model. Each of the constituent abilities has been found to predict either the ability to work or level of occupational attainment among persons with various mental disorders and/or healthy adults.

General cognitive/intellectual ability (*g*) is the most robust predictor of occupational attainment, and corresponds more closely to job complexity than any other ability. The wording underscores the closer association of *g* with “fluid” (reasoning) than “crystallized” (knowledge) intellectual abilities.

Language & communication refer to receptive and expressive language abilities to the extent that these can be impaired by disease or injury (as in post-stroke aphasia, neurodevelopmental language disorder, etc.). The Subcommittee recognizes that this construct overlaps language “skills,” such as literacy, fluency in English, and mastery of the rules of grammar. Complicating this overlap is the fact that individuals who develop aphasia usually suffer some loss of these skills as manifestations of the underlying primary language disorder. It also should be noted that language ability differs from speech production.

Memory acquisition refers to the ability to encode, store, and retrieve new information. Impairment of this ability is referred to as anterograde amnesia. The Subcommittee excluded the loss of remote autobiographical memories or over-learned skills (i.e., retrograde amnesia) from this ability for two reasons. The first is that it is *extremely* rare for a person to develop retrograde amnesia in the absence of anterograde amnesia as a result of a brain disease or injury. The second is that claimed retrograde amnesia in the absence of anterograde amnesia is a common presentation of feigned memory impairment. Consequently, the Subcommittee intended to emphasize anterograde memory impairment in the definition of this ability.

Attention & distractibility refer primarily to the ability to focus attention and resist distraction. The Subcommittee recognizes that this partially overlaps the ability to persist in working at a task, but construed the latter as placing greater demands on the ability to stay engaged over days to weeks. The description of this ability is intended to emphasize the capacity to focus attention despite environmental or internal distractions.

Processing speed refers to how quickly a person can process *simple* information, such as judging whether two numbers are the same. Simple processing speed has been found to account for variability in how well people perform many everyday activities, including untimed tasks. Individual differences in processing speed can be measured quickly and reliably with pencil-and-paper or computerized tests, but they generally are not observable at the behavioral level. Consequently, the Subcommittee notes that it would be particularly important to determine how reliably this ability can be rated from medical records, and whether such ratings have predictive validity.

Executive functioning probably does not represent a unitary ability, as is apparent in its description. Because of this, it might be impossible to assess executive functioning with a single measure. The Subcommittee recommends including it because measures of executive functioning predict work outcomes among persons with mental disorders. Clinical performance-based tests of executive functioning, such as the Trail Making Test, Tower of London, and Stroop Color-Word Test, frequently are timed and thereby conflate the assessment of executive functions with processing speed and attentional demands. In addition, it should be noted that behavioral ratings and performance-based tests of executive functioning rarely show significant statistical correlation in studies that administer both types of measures to the same participants.

Attendance/Punctuality refers to the ability to leave one's residence, attend work regularly, and be punctual within customary tolerances. This corresponds to Item 7 on Form SSA-4734-F4-SUP. As noted above, there was widespread agreement among the Roundtable participants that this item be retained.

Initiative refers to the ability to start and perform tasks once they are explained without an unusual level of supervision. The wording of this item's description was intended to emphasize both the ability to initiate tasks once they are understood, and the extent to which a person is capable for working independently. While the ability to initiate work is not represented on the existing MRFC assessment, the ability to perform understood tasks without special supervision corresponds to Item 8 on Form SSA-4734-F4-SUP.

Pace/Persistence involves the ability to perform understood tasks at an acceptable pace for a week without excessive breaks. This corresponds to Item 11 on Form SSA-4734-F4-SUP. Again, despite the fact that this ability clearly is multiply-determined and therefore susceptible to impairment by many different factors, there was widespread agreement that this ability should remain in a revised MRFC assessment because it is sensitive to longitudinal fluctuations in everyday functional competence.

Cooperation refers to freedom from interpersonal friction. Impairments of this ability can take the form of argumentativeness, excessive sensitivity, suspiciousness, hostility, etc. The current MRFC includes several items (12, 14,

& 15) that aim to separately assess interpersonal difficulties with supervisors, coworkers, and the general public. While the Subcommittee realizes that occupations differ in the nature, frequency, and closeness of interpersonal contact they entail, there is little reason to believe that mental disorders or injuries impair a person's ability to cooperate with specific *classes* of people (e.g., only coworkers).

Response to criticism refers to the ability to accept instruction, directions, and criticism from others. This corresponds to Item 14 on Form SSA-4734-F4-SUP, which frames the ability solely in relation to instruction or criticism by supervisors. The Subcommittee again recommends broadening this item to assess one's ability to accept instruction and respond appropriately to criticism, regardless of its source.

Social cognition refers to abilities that enable people to respond appropriately to others. Closely aligned with the concept of emotional intelligence, social cognition is thought to depend on a person's ability to interpret nonverbal communication, empathize with others, and recognize when another person's point of view differs from one's own. The current MRFC assessment does not capture social cognition, and the Subcommittee recommends adding it because several mental disorders and injuries can impair social cognition, and thereby disrupt normal social and emotional reciprocity.

Personal hygiene involves the ability to maintain an acceptable level of personal cleanliness, grooming, and socially appropriate attire. This largely overlaps Item 16 on Form SSA-4734-F4-SUP, but adds the element of wearing socially appropriate attire. The rationale for this addition is that occupations vary not only in what level of personal hygiene is acceptable, but also in the extent to which employees are expected to recognize and don attire that is acceptable in the work environment.

Symptom control refers to a person's ability to inhibit the expression of disturbing symptomatic behaviors, such as loud or pressured speech, vocal tics, extreme mood swings, or responding to hallucinations. The Subcommittee recommends adding this item because of wide variation in how completely and consistently persons with mental disorders can control the manifestation of symptomatic behaviors. Likewise, it is recognized that occupations likely differ in how much disturbing behaviors are tolerated.

Self-monitoring refers to a person's ability to monitor and evaluate the quality of his own task performance. The Subcommittee recommends adding this item because mental disorders and injuries can impair a person's ability to perceive the accuracy of his or her own task performance, especially when tasks require precision.

In addition to these 15 core psychological and interpersonal abilities that are recommended for assessment in a revised MRFC assessment, several others

were nominated but not included. Because the SSA might later consider adding one or more of these, a brief discussion of the Subcommittee's rationale for rejecting these items is offered next.

Several Roundtable participants and end users suggested that the revised MRFC should assess Judgment. The major reason this does not appear on the list of abilities recommended for inclusion is that the underlying construct is difficult to define, and the Subcommittee doubts that it can be reliably assessed. If the SSA decides to continue relying primarily on informant ratings (as it does now), isolated incidents that appear to involve poor judgment are likely to be weighted excessively by some adjudicators and dismissed by others. Wearing insufficient clothing in cold weather, failing to look both ways before crossing the street, giving money to a swindler, having an extramarital affair, driving while intoxicated, spending money excessively, smoking cigarettes despite having emphysema, driving while using a cellular phone, and criticizing one's supervisor could all be construed as failures of judgment. However, (1) they are likely to have very different consequences, (2) their impact on the ability to work are likely to vary enormously, and (3) they could all be attributed to factors other than judgment, per se (e.g., cognitive impairment, addiction, etc.). For these reasons the Subcommittee decided not to recommend that the revised MRFC attempt to assess judgment.

Others suggested that the ability to modulate mood or regulate emotion be included in a revised MRFC assessment. In fact, the Subcommittee did add an item (14) that is intended to assess a person's ability to inhibit the expression of symptomatic behavior, which certainly could include severely depressed, elated, or angry mood states. However, the reason a separate rating of mood state was not included in the list of recommended abilities for MRFC assessment is that feeling sad or depressed does not, in itself, preclude the ability to work. Many people work despite suffering from sadness, despair, anxiety, or hopelessness. Rather, it is only when depression causes one to neglect personal hygiene, not get out of bed, lose focus on tasks, slow down one's thinking, or stop avoid required interactions with coworkers that difficulty modulating one's mood impairs the ability to work. Thus, this item was not thought to convey useful incremental information above and beyond those recommended in the core list.

A third ability suggested for inclusion is stress tolerance. After beginning a job, persons with mental disorders often find work increasingly stressful. Over time they might worry that coworkers dislike them, develop insomnia, or stop taking prescribed medications. If the person comes to work late and gets reprimanded, he or she might quit rather than respond adaptively. While the factors leading to such job failures can vary enormously, persons with mental disorders often are less able to cope effectively with stressors than psychologically healthy adults. Although only one Roundtable participant nominated stress tolerance for inclusion in a revised MRFC assessment, the Subcommittee recommends that the Panel urge SSA to consider the *possibility* of adding it to the list of 15 items.

However, the Subcommittee was not prepared to make this recommendation for several reasons. First, because poor stress tolerance usually manifests as a series of maladaptive responses to stressors, reliable assessment of it almost certainly would require longitudinal data. Second, poor stress tolerance is very difficult to define in operational terms. Third, stressors that lead to decompensation among persons with low stress tolerance due to neuropsychiatric impairment probably have very little to do with job demands, *per se*. More often, they have to do with problems outside the work place, such as family conflicts, or than involve illness-related internal conflicts. For this reason, while illnesses and injuries can impair a person's stress tolerance, it is precisely because they can lead to unexpectedly severe reactions to idiosyncratic stressors and seemingly trivial events that it may be impossible to establish any correspondence between this ability and the demands of work.

Recommendation 4: The Subcommittee recommends that the Panel provide ongoing consultation to the OIS Project's psychometrician as the SSA develops items for data collection. More generally, the Subcommittee recommends that the SSA consider the possibility that MRFC abilities be assessed using different methods (e.g., informant ratings for some, performance-based measures for others) and different scales (e.g., Likert, behaviorally-anchored ratings, percentiles, etc.) for different categories of psychological and interpersonal abilities.

Recommendation 5: Finally, the Subcommittee recommends a series of studies to examine the reliability and predictive validity of any instruments developed to assess residual functional capacities and occupational demands as part of the OIS Project. The recommended studies are described in greater detail below.

Suggested Studies

The Subcommittee recommends that the SSA conduct a series of studies and data analyses. Before describing these, the Subcommittee notes that the SSA compiled a document entitled "Data on the top 100 Occupations by Employment for 2008 and Projected 2016." One table in this document shows the top 100 occupations by total persons employed for 2008 based on the *Household Data Annual Averages*. These data were drawn from the Current Population Survey, a monthly survey conducted by the Bureau of Census for the BLS. The top 100 occupations are based on SOC levels. A few represent occupational titles that encompass more than one detailed occupation. The occupations are ranked by the total employed (in thousands). Approximately 65% of persons in the U.S. labor force work in one of these 100 occupations. A reformatted version of this table appears below.

Occupation (Standard Occupational Classification)	Total Employed (Thousands)	Occupation (Standard Occupational Classification)	Total Employed (Thousands)
Managers, all other (managers not listed separately)	3,473	Medical assistants and other healthcare support occupations	831
First-line supervisors/managers of retail sales workers	3,471	Education administrators	829
Retail sales persons	3,416	Human resources, training, and labor relations specialists	803
Driver/sales workers and truck drivers	3,388	Hairdressers, hairstylists, and cosmetologists	773
Secretaries and administrative assistants	3,296	Farmers and ranchers	751
Cashiers	3,031	Other teachers and instructors	751
Elementary and middle school teachers	2,958	Inspectors, testers & sorters	751
Registered nurses	2,778	Management analysts	731
Janitors and building cleaners	2,125	Social workers	729
Waiters and waitresses	2,010	Food preparation workers	724
Cooks	1,997	Miscellaneous agricultural workers	723
Customer service representatives	1,908	Preschool & kindergarten teachers	685
Nursing, psychiatric, and home health aides	1,889	Counselors	674
Laborers and freight, stock, and material movers, hand	1,889	Police and sheriff's patrol officers	674
Accountants and auditors	1,762	Bus drivers	651
Chief executives	1,655	Painters, construction & maint.	647
Construction laborers	1,651	First line supervisors/managers of food preparation and servers	635
First line supervisors/managers of office and administrative support workers	1,641	Pipelayers, plumbers, pipefitters, and steamfitters	606
Carpenters	1,562	Welding, soldering, & brazing workers	598
Stock clerks and order filers	1,481	Insurance sales agents	573

Occupation (Standard Occupational Classification)	Total Employed (Thousands)	Occupation (Standard Occupational Classification)	Total Employed (Thousands)
Maids and housekeeping cleaners	1,434	Industrial truck and tractor operators	568
Bookkeeping, accounting & auditing clerks	1,434	Licensed practical/vocational nurses	566
Receptionists and information clerks	1,413	Medical & health services managers	561
Sales representatives, wholesale and manufacturing	1,343	Property, real estate, and community service managers	558
Child care workers	1,314	Office and administrative support workers, all other	558
First line supervisors/managers of non-retails sales workers	1,287	Shipping, receiving, and traffic clerks	543
Grounds maintenance workers	1,262	Computer programmers	534
Construction managers	1,244	Sales representatives & service	521
Postsecondary teachers	1,218	Billing and posting clerks and machine operators	516
Secondary school teachers	1,210	Computer & info systems managers	475
Office clerks, general	1,176	Tellers	466
Financial managers	1,168	Maintenance & repair workers	461
Miscellaneous assemblers and fabricators	1,050	Health diagnosing and treating practitioner support technicians	447
Food service managers	1,039	Clergy	441
Computer software engineers	1,034	Industrial machinery mechanics	439
Teacher assistants	1,020	Personal financial advisors	430
Lawyers	1,014	Network systems and data analysts	422
General and operations managers	985	Engineering technicians	416
Real estate brokers and sales agents	962	Data entry keyers	415
Production workers, all other	958	Machinists	409
Marketing and sales managers	922	Bailiffs, correctional officers & jailers	403
Physicians and surgeons	877	Operating engineers and other construction equipment operators	398
Electricians	874	Heating, air conditioning, and refrigeration mechanics	397
First line supervisors/managers of productions and operating workers	874	Loan counselors and officers	392
Personal and home care aids	871	Packers and packagers, hand	391
Security guards & gaming surveillance officers	867	Securities, commodities, and financial services agents	388
Automotive service techs & mechanics	852	Special education teachers	387
First line supervisors/managers of construction trades and extraction workers	844	Computer support specialists	382
Computer scientists and systems analysts	837	Postal service mail carriers	373
Designers	834	Taxi drivers and chauffeurs	373

Although not shown in this report, the manual for the Wonderlic Personnel Test (WPT; 1992) includes a figure that presents the mean and median scores of

persons employed in 72 occupations. Attorneys, for example, produced the highest mean and median WPT scores, while packers produced the lowest WPT scores of the 72 occupational groups. Occupations that appear in the top 100 table were cross-referenced with the WPT figure. This revealed that the most common occupations in the United States are filled by individuals who represent a *very broad spectrum of general cognitive ability* based their WPT scores. This exercise suggests that occupational differences in the WPT or some other measure of *g* among successful job incumbents might serve as an ideal measure of overall job complexity.

Based on this reasoning, the Subcommittee recommends that the SSA conduct a study in which all of the revised physical and mental residual functional capacity measures are administered to a nationally representative sample of persons who have worked for at least 6 months (i.e., “successful” incumbents) in one of the 150 to 200 most common occupations in the U.S. economy. If 50 to 75 successful incumbents in each occupation are assessed, this will require 7,500 to 15,000 study participants.

By characterizing the physical and psychological abilities of a broadly representative sample of successful job incumbents using the measures developed for the OIS, it will be possible to arrange all 150–200 occupations hierarchically in terms of each person-side characteristic. By reflection, each such hierarchy can be interpreted to reflect the extent to which the underlying ability is required by each job. In this way, occupational demands for lifting could be arranged from most to least by comparing the maximum weight incumbents of each occupational group can actually lift when tested. Likewise, differences in job complexity could be defined by arranging the mean scores of job incumbents on some measure of *g* by occupational group. The occupation whose incumbents earn the highest mean score would be identified as demanding the most general cognitive ability. The occupation whose incumbents earn the lowest score would be identified as requiring the least general cognitive ability. By documenting the *distribution* of scores on each physical and psychological measure for all 150–200 occupations surveyed in this way, the SSA would be able to specify where any given disability applicant’s measured abilities fall in the distribution of abilities required by each occupation. The same principle would apply to every measured person-side characteristic and every job-side demand.

The results of this study would solve many problems for the SSA. First, measuring the physical and psychological abilities of successful job incumbents would provide the SSA with empirical data about the actual abilities required to perform each occupation. Second, by studying only the 150–200 most common occupations, residual abilities of claimants will be compared to occupations that are all widely available. (Based on the table above, it is likely that the top 150–200 occupations include at least 65% of all jobs in the U.S. economy.) Third, by assessing both physical and psychological abilities of successful job incumbents, the SSA would obtain critical information about the *demand profiles*

of specific occupations for linkage with the *patterns* of residual abilities shown by individual applicants for disability benefits. Fourth, this approach would greatly decrease the “inferential leap” currently required between residual functional capacities as assessed by the SSA and occupational demands as described in the DOT. That is, each claimant’s residual abilities could be compared directly with the actual abilities of successful job incumbents. Fifth, by comparing each claimant’s residual physical and mental abilities with the distribution of corresponding abilities shown by successful job incumbents, the SSA could decide rationally where to set the cut-off that defines disability. For example, the SSA might decide that any claimant whose residual cognitive ability falls below the 10th percentile of that shown by actual job incumbents lacks sufficient residual cognitive ability to work in that occupation. Alternately, the SSA could lower or raise this cut-off and thereby allow fewer or more claims, depending on national priorities and the level of funding available to support disability beneficiaries. Finally, if the SSA also records evidence about medical conditions that successful job incumbents do or do not have, it will provide quantitative data about what residual capacities enable persons with medical condition to continue working. For example, if 2–6% of successful incumbents across different occupational groups report having migraine headaches at least once per month, the recommended study would enable the SSA to determine whether the residual capacities of these individuals differ from those of non-migraine-sufferers across a broad range of occupations.

In addition to this normative study, the Subcommittee recommends that a study be conducted of claimants for disability benefits and SSI/SSDI beneficiaries who have been adjudicated as unable to work. By administering the revised physical and mental residual functional capacity instruments along with the current instruments, the SSA will be able to determine which specific measures best distinguish individuals who are able to work (with or without medical conditions) and those who file disability claims and/or are adjudicated as disabled from working under current SSA rules.