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jMetrik: Open-Source Software for Psychometric Analysis

by J. Patrick Meyer

Editor's Note: Patrick Meyer is an Associate Professor in the Curry School of Education at the University of Virginia. I invited Patrick to write an overview article about jMetrik because I have used it extensively in my own work, and can attest to the features and benefits he describes below. I would emphasize the software's accessibility: it is a free application, its integrated workflow and intuitive user interface make it relatively easy to master for students and others lacking experience with statistical computing, and Patrick listens to his community of users and incorporates their feedback and suggestions in successive iterations of jMetrik.



J. Patrick Meyer

jMetrik is a free, open-source software application that provides a variety of tools for statistical and psychometric analysis (Meyer, 2014). It runs on any Windows, Mac, or Linux operating system that has a current installation of the Java Runtime Environment. There are a number of benefits to using jMetrik, and the open-source nature of the program invites transparency and welcomes community development.

The current release of jMetrik (version 3.1) provides basic statistical and graphical procedures such as frequencies,

correlations, barcharts, histograms, and kernel densities. Traditional psychometric methods in jMetrik include classical item analysis, reliability estimation, and differential item functioning, while modern measurement methods includes nonparametric item response theory and the Rasch family of item response models. Parameters for the Rasch, partial credit, and rating scale models are estimated via joint maximum likelihood estimation and a proportional curve fitting algorithm (see Meyer & Hailey, 2011). Estimated parameters for these item response models are comparable (or even identical with a very small converge criterion) to those

produced by Winsteps (Linacre, 2010). IRT scale linking is possible using fixed common item calibration, concurrent calibration, or separate calibration with the Stocking-Lord or Haebara method. Finally, the current version also includes maximum likelihood, maximum a posteriori, and expected a posteriori methods for estimating person scores.

The upcoming version 4 of jMetrik provides new features for item response theory and factor analysis. Newly implemented marginal maximum likelihood estimation makes available a wide array of item response models such as the 4PL, 3PL, 2PL,

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The Score is the official newsletter of APA Division 5—Division for Quantitative and Qualitative Methods—and is published quarterly in January, April, July and October. In keeping with this mission, *The Score* publishes the division's business meeting minutes, committee reports, and announcements.

In addition, where appropriate and space permits, short articles (800–1000 words) on technical issues and professional activities of Division 5 members, or on topics of current interest may be accepted. Brief announcements and calls for presentations related to conferences or meetings of particular interest to Division 5 members may also qualify. Submissions should be sent to *The Score* Editor, David Herzberg: dherzberg@wpspublish.com.

Submission deadlines are one month prior to publication: March 1 for the April issue, June 1 for July, September 1 for October, and December 1 for January.

The Score is published solely online and distributed via e-mail notification. Division 5 members receive the e-mail notice through the Division 5 DIV5ANN email listserv (see the box below).

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Guidelines for the "What's New?" column are provided with the column.

Urgent announcements should be submitted to the Division 5 e-mail lists, described in the box below.

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Keep up with the latest Division 5 news through its two e-mail listservs.

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DIV5ANN is used exclusively for announcements from Division leadership regarding issues such as elections, calls for nomination to boards and committees, the convention program, or policy changes. This is a "one-way" listserv that does not support listwide replies (that is, it is not structured to support discussion). **All members have been added to the listserv, and new members are added as they join. We strongly encourage all members to remain on the listserv in order to receive the newsletter and other important division news. We promise to keep the number of messages to a minimum.**

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jMetrik: Open-Source Software for Psychometric Analysis

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and Rasch models for binary items and the generalized partial credit and partial credit models for polytomous items. These new features are also tightly integrated with the existing scale-linking and person-scoring procedures currently found in the software. Exploratory factor analysis, using minres, maximum likelihood, and principal components, expands the measurement capabilities of jMetrik into multiple dimensions. These methods are accompanied by a variety of rotation methods and the ability to compute polychoric and polyserial correlations. An early release of version 4 is available for download at <http://www.itemanalysis.com>, but it will be in development for another month or two before its official release.

A key benefit of jMetrik is that it uses a single framework to combine psychometric methods that have traditionally required multiple programs. This feature allows a researcher to quickly transition from one method of analysis to another (e.g., in jMetrik the output from parameter estimation is the input for scale linking). This tight integration contrasts with other software. For instance, a researcher not using jMetrik might need up to three programs to estimate item parameters and conduct scale linking. There would be one program for estimation, one for linking, and another for reshaping and managing data. Even with a program like R, it can take considerable work to make functions from one package work efficiently with functions from another package. jMetrik was designed to avoid this frustration by integrating the workflow for a variety of psychometric procedures.

jMetrik has a user-friendly interface that is easy to learn. An analysis can be executed through point-and-click menus and dialog boxes. This feature allows new users to quickly learn the software, and it also

makes it much easier to teach measurement to students. From my own experience with teaching a course in item response theory, I know it can quickly digress into a course on using software. Class time that should be dedicated to instruction gets consumed by the time needed to debug archaic syntax and Fortran format statements. jMetrik's point-and-click interface avoids these struggles and allows professors to reclaim class time for teaching psychometric theory.

Although the point-and-click interface is the most obvious way to execute an analysis in jMetrik, it is not the only way. Every method of analysis can also be executed and fully automated through command scripts. In fact, the dialogs simply build scripts in the background; it is the scripts that drive the program. All of the scripts executed by the program are saved in the log. A user can view the log and save and edit scripts for later use. Given that this feature is less well known among users, version 4 will make it easier for users to access and write command scripts. In particular, in version 4 the command log has been separated from the error log. The command log keeps a running record of all of the methods executed by a user. It can be saved and used later to rerun the analysis, with only a few modifications (e.g., changing the names of data tables).

A primary motivation for creating jMetrik was the need for more transparency in psychometric computing. Closed, proprietary software has been the norm in the development of high-stakes tests, but this limitation makes it difficult for stakeholders to check and verify the integrity of the program. jMetrik is divided into two publicly available Java libraries. The jMetrik library contains all of the interface and database code, and the psychometrics library contains all of the measurement and psychometric methods. All of the code is available online at GitHub. Specifically, the psychometric library may be found at

<https://github.com/meyerjp3/psychometrics>. Anyone can browse the source code and download it. Programmers familiar with the Java programming language can also modify the code and contribute patches or new features. (Note that code modifications do not affect the library until reviewed and approved). Licensing for the psychometrics library permits royalty-free use in proprietary software without any further stipulations. In this way, companies can use the psychometrics library to build enterprise-grade proprietary systems using tools that are available to the public.

New features and capabilities will continue to be added to jMetrik. If you are interested in contributing to its development, please contact me. People of all skill levels can contribute to the project. There is a need for people who can write documentation and create tutorials and a need for people who can write Java code to implement new psychometric procedures. Perhaps the best way to contribute is to download and try the software. You will find it to be a powerful yet user-friendly software application for psychometrics.

References

- Linacre, J. M. (2010). A user's guide to WINSTEPS/ MINISTEPS Rasch-model computer programs: Program manual 3.71.0. Chicago: Winsteps.com.
- Meyer, J. P. (2014). Applied measurement with jMetrik. New York: Routledge.
- Meyer, J. P., & Hailey, E. (2012). A study of Rasch, partial credit, and rating scale model parameter recovery in WINSTEPS and jMetrik. *Journal of Applied Measurement*, 13(3), 248-258.

Report of the February 19-22, 2015 Meeting of the APA Council of Representatives (COR)

by Marcy Andberg and Susana Urbina,
Division 5 Representatives to COR

Thursday, February 19

Plenary Session on Council as a Policy Making and Disseminating Body—The main event was a speech by Dr. Brian Baird, a psychologist and former member of the US House of Representatives who is currently President of Antioch University in Washington. His address stressed the need for psychologists **to educate the public, legislators, and policy makers not only about our findings, but also about our methods.** In other words, he said, we must find ways to help those audiences understand research and research methods by making our communications palatable and interesting.

Friday, February 20

Rodney Lowman, Chair of the recently created Council Leadership Team (CLT), **spoke about the changes the COR is undergoing.** He gave the history of the Good Governance Project (GGP) that stemmed from strategic planning at the APA Convention and was followed by a number of initiatives proposed by the Implementation Work Group (IWG), which were outlined in earlier reports in *The Score*. He explained the role of the CLT and described the work that this group has done since December.

Panel Presentation on Real World Examples of Translating Science into Policy—Several panelists, including Natalie Gilfoyle—APA General Counsel—and Frank Worrell among others, gave presentations that highlighted the role that organized psychology and psychological research have played in a variety of realms, such as the amicus briefs provided to the US Supreme Court, legislation leading to consumer protection, United Nations Global Initiatives, among other areas.

Strategic Issue Discussion: Three Variations on Translating Science—Council



Marcy Andberg



Susana Urbina

members were divided into three breakout groups (Science/Research, Advocacy, and Educating the Public), each of which was tasked with discussing and voting on priorities in two major issues. We both attended the breakout group on research. The questions posed for our group were:

- (1) If a goal is to effectively translate science/scholarship into policy, what are the major implications for the education and training of psychologist researchers? and,
- (2) When are scientific findings sufficiently robust and replicated to be the basis for policy? How do we balance the things that we know and the things that remain unknown in order to help the public and policy makers in a meaningful way?

For the first question we had to identify the three most important implications and for the second we had to determine the three major take-aways from the discussion. Needless to say, with regard to the first issue, we both advocated and voted for the singular importance of using sound methodology, emphasizing science in psychology education, and training psychologists to communicate effectively. The other two questions were a lot more complex, but

we and the group generally emphasized looking for consensus based on the preponderance of evidence and considering risk/benefit ratios as well as ecological validity.

Strategic Issue Discussion: Reporting and integrating breakout group results—With regard to the first question, the priorities chosen by the group were:

- (1) providing incentives for faculty/supervisors and trainees at all stages of development to transform research findings into real world action,
- (2) improving communication so that it is more effective, and
- (3) having APA provide technical assistance to enable individuals, groups, programs, and areas to achieve the goal of translating science and scholarship into policy.

The top take-aways with regard to the other questions centered on:

- (1) consensus conferences with recognized experts to develop position statements to inform the public,
- (2) considering the risk/benefit ratio of providing input, and
- (3) the need for a decision matrix.

Saturday, February 21

Remembrance of Deceased Members—190 APA members died between July 2014 and January 2015, including Division 5 member Roger Millsap.

President Barry Anton gave an **update on the GGP**, outlining:

- (1) changes that have occurred so far, namely, the realigning of fiduciary roles to give the Board of Directors (BOD) responsibility, on a three-year trial basis, for budget decisions and CEO evaluation, as well as the election of a CLT,
- (2) changes that are in process, such as developing a triage method to move items through the system in an expeditious way and enhancing the use of technology,
- (3) changes that are still under review, such as the Leadership Pipeline Program and the Authority Matrix,
- (4) items on the agenda of the February 2015 meeting, concerning changes to Association Bylaws and Rules, and
- (5) **postponement of the proposed changes to the COR structure** (e.g., doing away with representation by apportionment ballot in favor of a single representative for each APA constituency).

In our previous COR reports, we expressed concern about the proposed changes to the COR structure, because we felt that these changes would reduce influence on COR from research-oriented psychologists.

Competencies for Psychology Practice in Primary Care—This document was endorsed and adopted as APA policy by a vote of 96%.

Proposed Association Rule Changes for Inclusion of Early Career Psychologists (ECPs) on APA Boards and Committees—This was an item with two motions. One listed all the Boards and Committees, including the Committee on Psychological Tests and Assessment (CPTA), that would have to include an ECP, and the other ex-

empted a few committees and one board from that requirement. CPTA had requested exemption from the requirement because it would alter the makeup of the committee. In order to make room for an ECP, one of the four Boards that are now represented on CPTA would have to relinquish a spot on the committee. The request of CPTA had been denied. We proposed amending the two motions in such a way as to exempt CPTA until 2020, with the understanding that CPTA would propose a change that would allow it to accommodate an ECP. The amendment was accepted and the two motions passed with 92% and 90% approval.

Financial Report—Bonnie Markham, APA Treasurer, reported that as of 12/31/2014 the estimated net assets of the Association amounted to \$67,000,000, classified as follows:

- (1) Reserve funds: \$36,000,000
- (2) Previously approved designations: \$9,050,000
- (3) Revenue from APA Insurance Trust: \$6,250,000
- (4) Annual draw from long-term investment portfolio for various projects: \$2,391,600, including \$100,000 for promoting public awareness of research findings
- (5) First year of a five-year investment in APA2.0: \$2,400,000
- (6) Uncommitted net assets: \$10,900,000.

The APA's consolidated investment portfolio grew from \$79,000,000 in 2010 to \$94,000,000 in 2014. The estimated net margin (revenues minus expenses) for 2014 is \$1,001,809 whereas the projected net margin for 2015 is a negative \$890,451. In spite of this, the three-year average net margin from 2013 to 2015 is still a positive one at \$1,113,269, as required. The Standard & Poor's Bond Rating for the APA as of May 2014 is BBB+, with a stable outlook, and the debt coverage ratio is 2.3:1 with actual liquidity at \$138,000,000.

APA Practice Organization (APAPO) and Practice Directorate Reports were provided by Katherine Nordal, Executive Director for Professional Practice. Among other things she reported on the \$9.02 million settlement that has ended the APAPO practice assessment dispute. Information about the agreement can be found at www.PracticeAssessmentSettlement.com

Diversity Training on Implicit Bias was presented to the Council.

Making APA Into a Data-Driven Organization—Council approved three motions dealing with:

- (1) ensuring that APA collects, maintains, and manages accessible member and professional data to allow evidence-based decision-making,
- (2) directing that all future modifications of the APA Strategic Plan are based on a process developed by the CEO, and
- (3) ensuring transparency and accountability in communicating APA membership data.

The three motions passed by votes of 85%, 83%, and 73%, respectively.

The Report from the Bylaws Template Workgroup was received by Council with a vote of 96%.

Modifying the Composition of the Board of Educational Affairs (BEA)—Council approved forwarding to the membership an amendment to the APA Bylaws providing that one seat on the BEA can be held by an APA Teacher Affiliate member. This item was approved by a vote of 96%.

Council approved the **Standards of Accreditation for Programs in Health Service Psychology** by a vote of 99%.

The Resolution on Gender and Sexual Orientation Diversity in Children and Adolescents in Schools was amended, to include the word "children" throughout the document, and the amendment was approved by a vote of 97%.

(Continued on page 10)



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SESSION 2 • June 8-12

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Advanced SEM
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Clinical Psychology Internship: The Competition is Fierce

by Sarah Mills

The culminating year for a clinical psychology doctoral student typically occurs outside of their doctoral training institution, at an internship site. The majority of clinical psychology doctoral programs require a full-year internship to be completed prior to graduation (Graham & Kim, 2011). According to the American Psychological Association (APA), these internships should provide high-quality training in clinical psychology practice and specialties. Furthermore, clinical psychology internships often facilitate the transition from graduate training to starting a professional career (Callahan, Swift, Hogan, Tompkins, Connor, & Klonoff, 2014). The APA accredits select internship sites and most states require completion of an APA-accredited internship for licensure as a psychologist. With non-accredited sites, additional documentation is needed to demonstrate that the internship site provides training that meets the standards for licensure. Because of the many advantages of APA-accredited internship sites, admission to them is a highly competitive process.

The number of students enrolled in clinical psychology doctoral programs has increased over the past thirty years (Norcross, Kohut, & Wicherski, 2005; Peterson, 2003) and, as would be expected, so has the number of applicants for clinical psychology internships. Furthermore, there is a growing imbalance between the number of students who apply for internships and the number of internship positions available. In 2006, of 3,210 students who submitted rank-order lists for internship, 731 (23%) students were not placed at an internship site (Kaslow & Keilin, 2006). According to the APA, this figure is representative of recent years where approximately one-quarter of psychology graduate students applying for internship do not secure one (Walton, 2013).

The internship application process has seen significant changes over the past two decades, in particular with the implementation

of the computerized Association of Psychology Postdoctoral and Internship Centers (APPIC) Match system in 1999, and use of the APPIC Application for Psychology Internships (AAPI), an online application for clinical psychology internships. According to APPIC, the matching system “provides an orderly process to help applicants obtain positions in predoctoral internships of their choice, and to help internship programs obtain applicants of their choice” (Association of Psychology Postdoctoral and Internship Centers, 2015).



Sarah Mills

So, how does the match system work? Students apply to internship programs using the AAPI, and the programs select applicants they would like to interview. Next, applicants submit a rank-order list of the programs they would like to attend and similarly, each internship site submits a rank-order list of their desired applicants. These lists are confidential and submitted to the National Matching Services Inc. (NMS), which operates matching programs for competitive positions. NMS places applicants with the highest-ranked internship program that also ranked the applicant and did not fill the internship position

with a higher-ranked applicant (Association of Psychology Postdoctoral and Internship Centers, 2015). Applicants are notified of the match results via email on a predetermined date.

In an effort to better understand the internship match process, studies have examined predictors of match success. A study of 157 clinical PhD programs, 56 clinical PsyD programs, and 71 counseling programs looked at how characteristics of the university, program, and student were associated with obtaining an APA-accredited internship (Graham & Kim, 2011). The study found no relationship between university characteristics (research intensive v. nonresearch intensive, freestanding professional school v. non-freestanding professional school, publically funded v. privately funded) and internship match. On the other hand, there were significant relationships between the type of psychology program and internship match. Students in clinical PsyD programs were

significantly less likely than students in clinical PhD programs to obtain an APA-accredited internship (Graham & Kim, 2011). This trend is consistent with previous research, and it occurs despite the fact that, in general, PsyD students apply to more internship sites than PhD students (Callahan, Collins, & Klonoff, 2010). In addition, clinical psychology students in programs that offered a high percentage of tuition waiver and assistantships were more likely to obtain an APA-accredited internship. This may be a result of the additional time that students without financial concerns can dedicate to coursework, research, and the internship application process itself. Furthermore, students with the credentials favored by internship sites may be more likely to attend programs that provide financial assistance. Finally, the only student characteristic associated with internship match was the percentage of women in the clinical psychology program. A greater percentage of women in a clinical psychology program was associated with higher internship match rates. Of note, students' GRE and GPA were not associated with internship match (Graham & Kim, 2011).

Few studies have attempted to tease apart what particular student and program characteristics impact successful internship match. Graduate students and faculty often assume that students with more clinical hours and publications are more likely to match (Callahan, Hogan, Klonoff, & Collins, 2014). However, the existing research shows that predictors of successful internship match are not always intuitive. With the current imbalance in internship match sites and internship applicants, should new internship sites be created to reduce demand? Some suggest that the current imbalance allows for a free-market approach where the best applicants are selected for the match and those with lower qualifications have greater difficulty entering the professional field (Callahan, Hogan, Klonoff, & Collins, 2014). It remains an open question whether these market forces are beneficial for the field of psychology. With the implementation of the Patient Protection and Affordable Care Act, a greater demand for mental health services is likely. Developing more clinical psychology internship sites may be needed to increase the number of clinical psychologists capable of providing mental health services.

References

- Association of Psychology Postdoctoral and Internship Centers (2015). *Introduction to the APPIC match*. Retrieved from <http://www.appic.org/Match/FAQs/Intro-to-the-Match>.
- Callahan, J. L., Collins, Jr., F. L., & Klonoff, E. A. (2010). An examination of applicant characteristics of successfully matched interns: Is the glass half full or half empty and leaking miserably? *Journal of Clinical Psychology*, 66, 1–16.
- Callahan, J. L., Hogan, L. R., Klonoff, E. A., Collins, F. L. Jr. (2014). *Predicting match outcomes: Science, practice, and personality*.
- Graham, J. M. & Kim, Y. (2011). Predictors of doctoral student success in professional psychology: Characteristics of students, programs, and universities. *Journal of Clinical Psychology*, 67, 340–354.
- Kaslow, N. J. & Keilin, W. G. (2006). Internship training in clinical psychology: Looking into our crystal ball. *Clinical Psychology: Science & Practice*, 13, 242–248.
- Keilin, W. G., Baker, J., McCutcheon, S., & Peranson, E. (2007). A growing bottleneck: The internship supply-demand imbalance in 2007 and its impact on psychology training. *Training and Education in Professional Psychology*, 1, 229–237.
- Norcross, J. C., Kohut, J. L., & Wicherski, M. (2005). Graduate study in psychology, 1971 to 2004. *American Psychologist*, 60, 959–975.
- Peterson, D. R. (2003). Unintended consequences: Ventures and misadventures in the education of professional psychologists. *American Psychologist*, 58, 791–800.
- Walton, A. G. (2013). *The internship match gets an overhaul*. Retrieved from <http://www.apa.org/monitor/2013/07-08/internship-match.aspx>

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Handbook of Item Response Theory Modeling
Edited by Steven P. Reise and Dennis A. Revicki
Published in January 2015 by Taylor & Francis (\$115 paperback; \$225 hardback)

Item response theory (IRT) has moved beyond the confines of educational measurement into assessment domains such as personality, psychopathology, and patient-reported outcomes. This new volume reviews classic and emerging IRT methods and applications that are enhancing psychological measurement, particularly for health assessments used to demonstrate treatment effectiveness. Examples using real data, some from NIH-PROMIS (Patient Reported Outcome Measurement Information System), show how to apply these models in actual research situations. Chapters review fundamental issues of IRT, modern estimation methods, testing assumptions, evaluating fit, item banking, scoring in multidimensional models, and advanced IRT methods. New multidimensional models are provided along with suggestions for deciding among the family of IRT models available. The book addresses the critical IRT conceptual and statistical issues faced by researchers and advanced students in psychology, education, and medicine.

Confirmatory Factor Analysis for Applied Research (Second Edition)
By Timothy A. Brown
Published in January 2015 by Guilford Press (\$51 paperback; \$98 hardback; \$51 e-book)

With its emphasis on practical and conceptual aspects, rather than mathematics or formulas, this accessible book has established itself as a vital resource on confirmatory factor analysis (CFA). Detailed, worked-through examples drawn from psychology, management, and sociology studies illustrate the procedures, pitfalls, and extensions of CFA methodology. The text shows how to formulate, program, and interpret CFA models using popular latent variable software packages (LISREL, Mplus, EQS, SAS/CALIS); how to understand the similarities and differences between CFA and exploratory factor analysis (EFA); and how to report results from a CFA study.

Using Mplus for Structural Equation Modeling (Second Edition)
By E. Kevin Kelloway
Published in 2015 by Sage (\$35 paperback)

Ideal for researchers and graduate students in the social sciences who require knowledge of structural equation modeling techniques to answer substantive research questions, this book provides a reader-friendly introduction to the major types of structural equation models implemented in the Mplus framework. This book retains the successful five-step process employed in the earlier edition, with a thorough update for use in the Mplus environment. Kelloway provides an overview of structural equation modeling techniques in Mplus, including the estimation of confirmatory factor analysis and observed variable path analysis. He also covers multilevel modeling for hypothesis testing in “real-world” settings, and offers an introduction to the extended capabilities of Mplus, such as exploratory structural equation modeling and estimation and testing of mediated relationships. A sample application with the source code, printout, and results is presented for each type of analysis.

Nonparametric Hypothesis Testing: Rank and Permutation Methods with Applications in R
By Stefano Bonnini, Livio Corain, Marco Marozzi, and Luigi Salmaso
Published in September 2014 by Wiley (\$73 e-book; \$90 hardback)

Nonparametric testing problems are frequently encountered in many scientific disciplines, such as engineering, medicine and the social sciences. This book summarizes methods for dealing with complex data with low sample size, including traditional rank techniques and more recent developments in permutation testing. The book has a supporting website containing all of the data sets examined in the book along with ready-to-use R code.

Report of the February 19-22, 2015 Meeting of the COR

(Continued from page 5)

IWG Bylaw and Association Rule Amendments to Implement Motions Approved by Council at its February 2014 Meeting—Council voted (a) to forward to the membership amendments to Bylaws V, VII, and VIII and (b) to amend the Association Rules needed after the Bylaws changes are approved, with 82% and 81% in favor, respectively. However, the Council also directed—by a vote of

94%—the APA President and the Chair of the CLT to appoint a workgroup to resolve inconsistencies in the language of this item. This workgroup will examine the issues dealing with pro/con statements to be sent to the membership in November of 2015 and will bring their work to Council for a vote in August of 2015.

Amendments to Association Rules: Council Leadership Team and Needs Assessment, Slating and Campaigns Committee—Council directed that the

same workgroup mentioned in the previous paragraph should review the language for this item for follow-up in August of this year.

Helping International Colleagues with the Declaration on Research Assessment—Council, by a vote of 99%, approved the motion calling for the APA to join other international scientific organizations to endorse the 2012 San Francisco Declaration on Research Assessment (DORA).

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The Score is the newsletter of the American Psychological Association's Division 5—Division for Quantitative and Qualitative Methods. Division 5 is concerned with promoting high standards in both research and practical application of psychological assessment, evaluation, measurement, and statistics. Approximately half of the Division 5 members are university faculty members in quantitative psychology, psychometrics, educational psychology, or industrial-organizational psychology and half are engaged in careers in industry, including the areas of individual and large-scale assessment. More than 1,000 Division 5 members receive *The Score* each quarter.

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