

APA  
III  
Division 12

# CLINICAL SCIENCE

Society for the Science of Clinical Psychology  
Section III of the Division of Clinical Psychology  
of the American Psychological Association  
*developing clinical psychology as an experimental-behavioral science*



## Newsletter

Winter - Spring 2004 Issue

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### INSTRUCTIONS FOR AUTHORS

*Clinical Science* is published as a service to the members of Section III of the Division of Clinical Psychology of the American Psychological Association. The purpose is to disseminate current information relevant to the goals of our organization.

**Feature Articles** may be submitted to the editor via e-mail. They should be approximately 16 double-spaced pages and should include an abstract of 75- to 100- words.

**Brief Articles** may also be submitted, and should also include a 75- to 100-word abstract.

All articles should be submitted as an attachment to an e-mail and formatted according to the *Publication Manual of the American Psychological Association, 5th edition*.

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## Comments from the President

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As I have just completed my year as President of SSCP and am turning the metaphorical gavel over to Don Fowles, I would like to update you on what I was up to during my term, and the opportunities and challenges facing our organization.

I want to start by describing some conflicts the Section has had with APA. As many of you may know, in 2002, Scott Lilienfeld, then President of SSCP, wrote a letter to the Governor of New Mexico opposing the legislation in that state that would enable psychologists to obtain prescriptive authority there. Although it might be argued that Scott's letter did not take a stand against prescription privileges per se but rather the specific legislation under consideration, APA did not look kindly on his behavior and informed him that because: (1) SSCP is a constituent part of APA, (2) APA has a policy that no Division, Section, or Chapter can adopt policies that contravene APA policy, and (3) the promotion of prescriptive authority for psychologists was an official policy of APA, then Scott's actions constituted a violation of APA policy. According to various senior staff and legal counsel at APA, the issue was not Scott as an individual taking a personal stand. Rather, the problem, they argued, was that he was taking a public stand in his role as President of an APA Divisional Section. It is critical to point out that neither Scott nor most APA members (myself included) was aware of APA's "we speak with one voice" policy at that time. Although no one on SSCP's executive committee liked APA's policy quashing a Section's public dissent, neither Scott nor any other SSCP officer did any additional lobbying against prescriptive authority (nor any other standing APA policy) since then.

When I began my term in January, I attended the Division 12 mid-winter meeting in order to find out more about the Division and the role of our Section in it. It was immediately clear to me then that our Section was viewed as "controversial." Because prescriptive authority was not a priority for me to address during my term and because the New Mexico incident was in the past and had already been resolved, I was not very concerned about this issue. That is, I wasn't concerned until the end of April when I found out that the APA Board of Directors was issuing a letter threatening sanctions against us as a Section because of SSCP's anti-prescription privilege statement (passed by a vote of the membership in 2001) on our website.

The events that transpired over the subsequent six weeks are not worth reporting in detail but I believe the following points warrant communication:

1. The SSCP Executive Committee (EC), consisting of Scott Lilienfeld (Immediate Past President), Don Fowles (President Elect), Sheila Woody (Section Representative to Division 12), and Denise Sloan (Secretary/Treasurer and several other hats), consulted extensively with each other by email and conference call to discuss various dimensions of the issue. Although there was a strong consensus among EC members that we didn't like APA's policy limiting public dissent, there was a lack of consensus on how to proceed. (I should also add that not all EC members were convinced that the APA by-laws actually do prohibit public dissent on official APA policy, an issue we continue to seek clarification on.) Indeed, members of the EC diverged considerably. Some EC members felt that any type of "gag rule" was inappropriate and complying with APA's instruction to remove the offending material from the website represented appeasement to a tyrannical regime. Other EC members felt that, like it or not, SSCP is a part of the APA (more on that below), and regardless of personal feelings about either prescriptive authority or limits on free speech, as elected officers of a component organization of APA, we had no choice but to comply with APA's request in this instance and to follow APA rules in our official actions.
2. I had multiple phone conversations with Nathalie Gilfoyle, general counsel at APA, and a lengthy phone call with Bob Sternberg, APA President, discussing what we could and couldn't do as a Section. Both Bob and Nathalie stressed that individual members and nonmembers of APA, acting as individuals, are free to take any stand they chose to; any of us can write a letter or oppose APA's public policies, as long as we are acting as individuals without the imprimatur of APA or one of its divisions, chapters, or sections.

Additionally, they both assured me that there was no intention to limit debate within APA. That is, it is appropriate for us as a Section to lobby Division 12 or APA on specific issues that concern us as a group. The issue was going public, as a Section opposing an official policy at APA. For what it is worth, I found both Nathalie and Bob to be very reasonable people and to share the same values that I assume most members have regarding collegiality, fairness, and the importance of scholarship and unfettered inquiry into important issues.

3. Denise Sloan and I met with Nathalie and Norman Anderson (APA CEO) and Kurt Salizinger (head of the Science Directorate) at APA headquarters in Washington in order to better understand the dimensions of the problem and work towards a solution. It was a cordial and constructive meeting and, I believe, all of us went away from the meeting feeling that we could move forward in a way that met the legitimate interests of all concerned.
4. Following this meeting, the EC had another conference call and had voted on how to proceed. Again, there was a lack of consensus, but the majority vote was to do the following:
  - a. Move the SSCP statement on prescription privileges to a secure portion of the APA website. SSCP members (at least those who are also APA members) and all APA members can now access the statement by signing in with their APA username and password. (The link to this site is on the SSCP website.)
  - b. Attempt to post on our website papers the APA symposium on prescription privileges that Bob Sternberg helped to organize in Toronto this past August. I confess that I have not done this, as getting complete manuscripts was not as easy as I had hoped.
  - c. Work with APA to try to get more dissenting opinions on key policy-related committees at APA.

At this point the ball is in APA's (and Division 12's) court. As an act of good faith, the SSCP prescription privilege statement has already been migrated to the APA website. I know that Don Fowles believes that the issue regarding open dissent is a critical one, and I suspect that this is an issue that SSCP will revisit.

The conflict over APA regarding Scott's letter to the Governor of New Mexico and our website has highlighted a number of issues surrounding where SSCP is in its history, and where it should go. As pointed in Tom Oltmann's history of the section (<http://pantheon.yale.edu/~tat22/history.htm>), the Section has always played a key role in voicing principled

concerns about the direction of clinical psychology. Although EC members differ on how they feel about the concept of prescription privileges, in principle, all of us have concerns about the process that led to APA adopting the gaining of prescription authority as an official policy and to what appears to be progressive watering down of the training model, as it becomes closer to reality. We also share concerns that the movement could have on the discipline. Several of us feel that although perhaps well-conceived in the abstract, with few (but notable) exceptions, professional schools of psychology (now a major if not dominant force in the selection and training of clinical psychologists) have served to commoditize the doctoral degree in our profession and have produced a generation of practitioners who are poorly versed in the science of our discipline. That is, our recent history of innovation in training gives pause for concern about other bold new ventures for clinical psychology.

Because of seeming increasing divergence between the policies of APA and the beliefs of many of our members, there is a general concern among some of us regarding whether or not APA is the appropriate home for our organization. I believe the time is right for beginning a comprehensive discussion among members regarding whether or not SSCP should remain a part of APA or should incorporate itself independently. To be clear on our current status, we are a part of APA and Division 12; indeed, our #1 by-law states that fact unequivocally. However, for more than 10 years, the Section has accepted "at large" members who are not part of APA. Also, in recent years, because of the efforts of past SSCP presidents and the leadership of Alan Kraut (CEO of the American Psychological Society), we have become more open with respect to organizational allegiances.

Although I believe the time is right to begin a thoughtful and deliberate discussion of secession from APA, I am not advocating this position. I think there are a number of complex issues here regarding the conflict between our ability to affect APA policy (more effective from within I believe) and our intellectual comfort with fraternizing with more like-minded organizations. I hope that over the next year or two we will have a series of pro and con arguments about the relative merits of maintaining our APA sectional status, incorporating independently, or perhaps affiliating more closely with an organization like APS. It needs to be clear, however, that because our APA identity is part of our by-laws, disaffiliating from APA would require a majority vote of the membership. Given that it is hard to get half of the membership to vote at all, obtaining the necessary number of votes to make the required by-laws change may be unlikely. In addition, there is a "constitutional" issue concerning who could vote on this issue. Another part of our by-laws stipulates that only divisional members can vote on issues concerning divisional issues. Strictly defined, one could argue that disaffiliating from the Division is a divisional issue. If interpreted this way, those most disaffected with APA would not be allowed to vote on disaffiliation. However, I can't infer the intent of the framers of the by-laws and whether the voting restriction on

nonDivisional members was intended to prevent them from having a voice in the fundamental form of the Society, or merely to disenfranchise them from Divisional activities where they are clearly not stakeholders. Should our discussions ultimately lead to a by-laws vote, this issue would need to be clarified first.

I'd like to now comment on some more positive fronts. First, Jack Blanchard (the new President Elect of SSCP) and William Horan have agreed to put together a new edition of the SSCP guide to internships in clinical psychology. Jack's previous effort on this proved to be a major resource for clinical psychology graduate students but over time had become dated. The need for such a guide remains as strong as it ever did, and I can't express my gratitude enough to Jack and William for taking on this thankless but much appreciated task. The guide will be completed in late spring and we will have a session "releasing it" at the APA convention this summer.

Teresa Treat has been doing a great job with our website and we now have an official domain name that people can remember: [www.sscpweb.org](http://www.sscpweb.org).

We now have student poster sessions at both APA and APS. I'm a bit concerned that we might be spreading ourselves a bit thin by holding two poster sessions. On the positive side, however, I like the idea of our students having choices. Having attended APS this past year, I wish more of our students could have attended. Both this year and last, every session I attended was excellent, and having a presence at APS is a very positive development that I hope continues. I want to thank Scott Lilienfeld and Alan Kraut for fostering this opportunity for our students. We are planning another student poster session at APS this year, and I hope we will be able to continue this tradition.

The APA Science Directorate has been soliciting input from our Section on a number of policy issues. I believe that reflects the (appropriate) perception that we're one of the "go to" groups for APA when it wants high quality input on clinical science. It is gratifying to see that they have incorporated input from SSCP into their policy statements. I have been asked by the Board of Scientific Affairs to attend an upcoming meeting this winter on continuing education, in large part, to represent those who believe it is important to make science the foundation of clinical training.

I am finishing my term with much work left unfinished, but I hope that we will still be able to follow through on several things that, in my mind, still need to be accomplished:

1. Begin the dialog, in earnest, about our independence from APA.
2. Begin a dialog about lengthening the terms of president, president elect, and immediate past president to two years each. I mention this because I have been overwhelmed with the complexity of APA

and the relatively fast pace that time passes when trying to accomplish some goals. Longer terms would provide a better opportunity for officers and various committee members to learn the ropes and more effectively press SSCP's agenda.

3. Increase membership. I recently reviewed the list of our members and was disappointed to see how many former members (including many former officers of the Section) have let their membership drop. I believe that in order for a strong clinical science agenda to be advanced, we need to have both members to draw upon for service and funds to send them to meetings of various APA committees. I'd like to see an SSCP liaison to every important APA committee so that we have our observers on those critical committees involved in developing training curricula, etc. (e.g., CAPP). In order to do this, we need both the warm bodies and the funds to get them where they need to be. Additionally, more funds would allow us to provide subventions to worthy SSCP-sponsored activities, such as the internship guide.
4. I'd like to start (or perhaps restart) a tradition of having business meetings at the APA convention that are attended by a large proportion of the membership (as implied in our by-laws). There are many issues facing us as an organization, and it is critical that we try to sit down as a group and talk about them. I hope that those of you attending the APA convention this year in Honolulu will attend the Business Meeting and have the opportunity to voice your opinions about issues raised in this letter and any other issues relevant to SSCP.

Finally, I'd like to thank all of those individuals who give their time and energy to our Section. These include my fellow elected officers at SSCP (Jack Blanchard, Don Fowles, Scott Lilienfeld, Denise Sloan, and Sheila Woody), John Klocek (dissertation awards), Michael Bailey (listserve), Teresa Treat (website), and Adele Hayes (newsletter). Also, my appreciation to Alan Kraut and the senior staff at APS for making us welcome there, Suzanne Wandersman and Merry Bullock at APA's Science Directorate for remembering we exist and caring about what we have to say, and to all of our members who, although differing in many specific beliefs, share the common big belief that is embodied in our name...the centrality of science in the discipline of clinical psychology. Good luck Don!

Sincerely,

Kenny

## Student Corner

### A Guide to Funding Sources for Graduate Students

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Despite what many graduate students may think, there are grants funded by various agencies specifically for graduate students that are worth your time and effort. There are numerous reasons that it is a good idea for a graduate student to apply for a grant during their years in school:

1. Submission of a grant application prepares you for the process of writing professional grants once you finish school.
2. Submission of a grant to a national funding agency, whether funded or not, indicates to that organization that you are a serious clinical researcher.
3. Funding of a grant application is a huge success, no matter what stage you are at in your career. A funded grant can always be referred to in future grant and job applications.
4. Grants provide you with money, which is never a bad thing, and will likely improve the quality of the research you are conducting.
5. Successful completion of a funded research project indicates to grant agencies that "you mean business," - that is, you are capable of not only getting a grant funded, but also completing your research in a timely manner and disseminating your findings to the professional community. In a community where actions speak louder than words, your ability to be successful in your endeavors is crucial and rarely goes unnoticed.

There are two major federal agencies that offer substantial funds to graduate students and also impart a great deal of prestige: the National Institute of Health (NIH) and the National Science Foundation (NSF).

**National Institute of Health:** NIH offers a number of grants to graduate students. Perhaps the most well known and commonly utilized by graduate students in psychology is the F31, also known as the Ruth L. Kirschstein National Research Service Award (NRSA), offered by the National Institute of Mental Health (NIMH), described in detail below. NIH offers numerous F31 awards to graduate students based on area of interest [i.e., the specific institute within NIH, such as the National Institute of Drug Abuse (NIDA) and the National Institute of Alcohol Abuse and Alcoholism (NIAAA)]. Information regarding NIH fellowships offered to students by the various institutes of NIH can be found at <http://grants.nih.gov/training/trainingfunds.htm>. NIH also offers various awards for members of special

populations, including underrepresented minorities and individuals with disabilities. General information regarding the various types of NIH grants available to graduate students, including those discussed above, can be found at <http://grants.nih.gov/training/extramural.htm>. On this page, the last bullet contains various links to resources for students interested in NIH funding. It is an excellent place to start your search, if you are interested in one of the many grants NIH has to offer.

**National Institute of Mental Health:** NIMH offers two major types of research training grants, also known as National Research Service Awards (NRSA). For predoctoral graduate students, NIMH offers the F31. One of the major benefits of receiving an F31 is the fact that NIMH will pay tuition, fees, and health insurance, in addition to providing the student with up to \$2,500 to help defray the costs of research. Submissions are reviewed in February, June, and August of each year and are fairly flexible regarding the research plan of the individual (i.e., if changes need to be made in order to complete your research). More specific information regarding the F31 can be found at the following link: <http://www.nimh.nih.gov/grants/Fellowship1.pdf>. General information regarding research training grants offered by NIMH can be found at: <http://www.nimh.nih.gov/grants/pafellow.cfm>. The application itself can be found at: <http://grants1.nih.gov/grants/funding/416/phs416.htm>.

**National Science Foundation:** NSF offers graduate research fellowships, which are roughly the equivalent of the NIMH F31. Similar to the F31, obtaining an NSF graduate research fellowship is not only prestigious, but also worthwhile in terms of the amount offered to funded applicants. Graduate research fellows receive \$21,500 as a 12-month stipend and are provided a \$10,500 cost of education allowance per tenure year. Submissions must be made by early November in the year prior to funding and are reviewed by March in the funding year. General information regarding graduate research fellowships can be found at <http://www.ehr.nsf.gov/dge/programs/grf/>. Guidelines for submission and specific information regarding graduate research fellowships can be found at: <http://www.nsf.gov/pubs/2002/nsf02150/nsf02150.pdf>. The application itself can be found at: <http://www.ehr.nsf.gov/dge/programs/grf/grfp.asp>.

In addition to NIH and NSF, there are various federal agencies that provide funding to students. For further information, see the list provided at the end of this article.

If none of these options appeal to you, there are numerous privately funded agencies that also provide funding to students. Typically, the dollar amount offered to students by these agencies is less than those offered by NIMH and NSF; nevertheless, the number of students likely to apply to these sorts of grants is much smaller, making your chances of getting funded that much better. Ultimately, getting any grant funded as a graduate student speaks very well of your ability to pursue your research goals and succeed, a factor that can be very helpful in your future research endeavors. In order to find grants funded by private agencies, it is best to start by asking your mentor if he/she knows of any private agencies that fund student research in your area of interest. Another option is to be a part of organizations/societies that focus on your area(s) of interest. Often, these organizations are privy to information regarding private funding and will provide this information gladly. Finally, it never hurts to start searching on the Internet and asking anyone you think may know about private funding agencies. You'd be surprised how much information a little bit of effort can get you.

As a final note, keep in mind that the grant writing process can be tedious and requires that you be detail-oriented and have a clear sense of your research plan. Here are a couple of hints to help you in the process:

**Hint:** In filling out an F31, the section on training plan is crucial. Spend time on it, make it as detailed as possible, and demonstrate to the reviewers that funding your grant will significantly improve your academic pursuits and help you in your path to becoming a researcher. In writing up your training plan, consider carefully how your plan will substantially enhance your education in a way that you could not obtain without funding. Discuss courses that you would not ordinarily take as a part of your program, such as advanced statistical courses, neuroscience courses outside of your department, or computer programming classes. You might even propose studying in another setting for a semester, if it can add to your training in a way that cannot be accomplished at your primary site. Also, don't propose a plan that you do not intend to carry out. This can become apparent in your application because it might not look feasible, and if you are funded and do not carry out what you proposed, this can affect future funding.

**Hint:** Be as clear yet concise as possible when discussing your proposed methodology and data analyses. Always include a power analysis. Be very specific regarding your proposed data analyses. Don't leave it up to the reviewer to figure out. For example, it is not enough to state that you will perform a regression – you must delineate what type, which variables, and why the type of analysis you have chosen is the right one based on your proposed data and your specific aims and hypotheses.

**Hint:** For any type of grant you submit, similar to any publication, it is always wise to solicit critiques from your mentor and/or colleagues. In particular, your mentor is likely to have experience in both your content area and the process of grant writing. It is also helpful to have someone outside of the area provide feedback. First and foremost, no matter how many times you may read a manuscript through, it is almost guaranteed that you will miss something. It is also important to make sure that your ideas make sense to someone who is familiar with the subject area and available literature. Their help will definitely improve your application, thereby improving your chances of getting funded.

**Hint:** Have your grant completed well before the deadline, and read it at least three times through to make sure there are no grammatical mistakes, all references have been properly cited, and all parts of the application have been completed. Nothing irritates a reviewer more than missing pages, unanswered questions, or sloppy work. It also raises questions about one's general level of competence. In terms of deadlines, it is wise to leave sufficient time to get necessary signatures prior to your submission. A good rule of thumb is to allot two weeks prior to the deadline to acquire university signatures. Remember, the grant office is likely to be as busy, if not more so, than you are – make sure to leave them enough time to review your grant. Never forget – a late grant application is as good as no application.

**Hint:** Consider applying to multiple grant sources. Grants are extremely competitive – the more you apply to, the higher your chance of success.

### Funding Agencies

A great place to start searching for student funding is on the new APA graduate student website. They have a specific link for student funding at:

<http://www.gradpsych.apags.org/may03/funding.cfm>

Among the agencies listed are:

#### **American Psychological Association**

- Dissertation grants
- Diversity dissertation grants

#### **Society for the Science of Clinical Psychology**

- Dissertation grants

#### **American Psychological Foundation**

- The Elizabeth Koppitz Munsterberg Fellowships and Travel Stipends (for graduate students in child psychology)
- APF/COGDOP Graduate Research Scholarships

#### **Community of Science (COS) ([www.cos.com](http://www.cos.com))**

See the following link for awards for graduate students in social sciences: <http://fundingopps.cos.com/cgi-bin/result>

## Feature Article

# Adaptive Treatment Strategies: An Emerging Approach for Improving Treatment Effectiveness

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### Adaptive Treatment Strategies

In the treatment and prevention sciences, it has long been evident that there is individual heterogeneity in need for treatment in terms of disorder severity, background characteristics, and co-occurring problems. Indeed, the need for treatment may vary across time. For example, there is increased recognition that addictions have many of the characteristics of chronic disorders (McLellan et al., 2000). In particular, addictions are characterized by interweaving time intervals of high and low risk. The heterogeneity in need translates into heterogeneity in response to various aspects of any treatment program, both across individuals and within individuals across time. Researchers have come to realize that it is possible to utilize this heterogeneity when designing treatment programs, potentially improving the effectiveness of these programs. Rather than focusing on the traditional "one-size-fits-all" approach to program development, treatment and prevention theorists are recommending integrated approaches that link services across various levels of intensity and allow for greater individualization in programming over time (Brooner & Kidorf, 2002; Dryfoos, 1994; Weissberg & Greenberg, 1998). This individualization in programming occurs via *adaptive treatment strategies* (Brooner & Kidorf, 2002; Collins, Murphy, & Bierman, 2002; Conduct Problems Prevention Research Group, 1992; Sobell & Sobell, 1993, 1999, 2000).

In adaptive treatment strategies, the treatment level and type is repeatedly adjusted according to the individual's need. For example, consider an addiction maintenance study for alcohol dependent subjects. Following an intensive outpatient program, alcohol dependent subjects are prescribed the opiate antagonist naltrexone, which has been shown in prior research to reduce alcohol use, particularly episodes of "heavy" drinking (5 or more drinks per sitting) (O'Brien & McKay, 2002). Over the next months, subjects are monitored. If during a defined period, the subject has more than one heavy drinking day (yet is compliant with naltrexone medication) then the subject receives an increase in care via a combined motivational enhancement therapy and cognitive behavioral therapy (CBT) in addition to the naltrexone medication. In this adaptive treatment strategy, only the subject who exhibits need (as defined by heavy drinking days) is offered an increased level of treatment (naltrexone + CBT).

In adaptive treatment strategies, the goal is to provide treatment that optimizes response. In this respect, this treatment strategy more closely simulates real world clinical practice than does the standard one-size-fits-all treatment. In the standard, or fixed, treatment strategy, the composition and dosage of the treatment is not varied in response to the needs or characteristics of individual subjects. In contrast, in an adaptive treatment strategy, both the dosage and treatment type may vary across individuals and within an individual over time. This variation reflects the needs of individual subjects.

An example of a fixed treatment strategy is a school-based drug abuse prevention curriculum that is to be delivered to all sixth through ninth graders in a particular school. Every component of the multi-component intervention that may be necessary for any particular subject is included in the curriculum, and each child is offered the same treatment. Contrast this with an adaptive treatment strategy used in the Fast Track (Conduct Problems Prevention Research Group, 1992, 1999a, 1999b) program. This is a multi-year, multi-component program designed to prevent conduct disorders in high-risk children. The Fast Track program included a core intervention delivered to all study subjects, plus several adaptive components. One of the adaptive components was home visits for family counseling, where the number of home visits assigned to each family varied depending upon level of family functioning. The dosage assignment of the adaptive components in Fast Track was time-varying, in that, family functioning was reassessed three times per year, and dosage was readjusted accordingly.

Below we describe adaptive treatment strategies in greater detail; we review why and when we would want to use adaptive treatments. This is followed by an outline of design goals. Collins, Murphy, and Bierman (2002) provide further discussion for the interested reader.

#### Author Notes

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### *What is an Adaptive Treatment Strategy?*

Adaptive treatment strategies tailor the dosage and/or type of treatment to each subject by use of prespecified decision rules. The rules provide the means by which we translate subject's values on key characteristics, called *tailoring variables*, to dosage amount and type. Rather than delivering the same dosage and treatment type to every subject, an adaptive treatment strategy assigns different dosages/ treatment types across individuals, and within individuals across time according to their values on the tailoring variables. A subject may even be assigned no treatment at a particular time. For example, there may be individuals who do not receive certain components of a multi-component treatment or at certain times do not receive one of the treatment components. The assignment of a particular dose and/or type of treatment is based on the individual's values on the tailoring variables. The logic is that the level or type of treatment required to address the needs of individuals varies, according to these tailoring variables. For example, individuals who are characterized by a particular risk factor may require an intensive treatment, whereas less treatment will be sufficient (and perhaps optimal) for individuals who do not have this characteristic. In the Fast Track example above, family functioning is the tailoring variable; the treatment dosage is the number of assigned home visits for family counseling. In the addiction maintenance study, the number of heavy drinking days is the tailoring variable, and the treatment type is naltrexone alone or naltrexone in combination with CBT.

### *Further examples of Adaptive Treatment Strategies*

In a sense, adaptive treatment strategies are actually quite old. In any medication trial, ethical considerations require that researchers establish a protocol to monitor subjects for side effects and if necessary, take the subject off treatment. In many cases, "safety net" interventions are provided to patients who do not respond to the experimental treatment. Such protocols can be termed adaptive treatment strategies, although the goal is to prevent morbidity rather than to optimize treatment response. Adaptive treatment strategies with the aim of optimizing response have appeared with increasing frequency in the literature. For example, stepped care approaches advanced by Brownell and Wadden (1991) and Sobell and Sobell (1999), and the expert system approaches as advanced by Velicer, Prochaska, Bellis, DiClemente, Rossi, Fava, and Steiger (1993) and Kreuter, Strecher and Glassman (1996), are adaptive treatment strategies.

The stepped care approach (Sobell & Sobell, 1999, 2000) starts all clients at the lowest level of treatment and then steps up the treatment on the basis of the client's functioning during treatment. Breslin, Sobell, Sobell, Cunningham, Sdao-Jarvie, and Borsoi (1999) describe and evaluate a stepped care approach for problem drinkers. A primary outcome was the percentage of days between the end of treatment and six months on which the clients consumed no alcohol (i.e., "percent days abstinent"). Initially, all clients are assigned to a relatively low intensity intervention, Guided Self Change counseling (Sobell & Sobell, 1993). If a

client consumed more than 12 drinks per week prior to the third treatment session, the client was assigned a supplemental intervention that included an additional counseling session and progress reports at the one and three month aftercare contacts. Clients were not offered the supplemental intervention, if they did not meet the drinking cutoff. Thus, the tailoring variable was the number of drinks per week, which is a proximal measure of the primary outcome, days abstinent.

A second example of an adaptive strategy is given by Brooner and Kidorf's (2002) treatment of opioid-dependent individuals. This adaptive strategy is composed of two adaptive components. The first component is a stepped care approach in that all clients are provided methadone treatment and begin with the lowest level of counseling sessions (once per week). In this strategy, the number of counseling sessions (dosage) is tailored to a proximal outcome, namely presence/absence of drug free urinalyses and attendance at assigned counseling sessions. Clients are moved between higher and lower numbers of counseling sessions, depending on these variables. The absence of drug free urines and/or missed counseling sessions is interpreted as evidence of greater need for treatment (i.e. more counseling). The rationale for using attendance is that attendance at assigned counseling sessions is an indicator of progress toward abstinence. Assigning more counseling to subjects who miss sessions requires a second adaptive treatment component: "encouragement to adhere." Brooner and Kidorf (2002) link attendance at counseling to treatment features or characteristics that subjects value, in this case, preferred time slots for daily methadone dosing and avoidance of a 30-day methadone taper combined with discharge from the program. It should be noted that discharged individuals are given a "second chance," in that they are guaranteed readmission to the program within 24 hours, if they agree to attend counseling sessions. Regular attendance at counseling sessions results in earlier daily methadone medication dosing and continued access to methadone. In this second adaptive treatment component, the tailoring variable is attendance at counseling sessions; the encouragement (dosage) is the timing of methadone dosing or discharge. Note that the second adaptive treatment component uses attendance at counseling sessions as a tailoring variable, whereas the first adaptive treatment component uses both attendance and urinalysis as tailoring variables.

Expert systems in smoking cessation are adaptive treatment strategies. For example, the Pathways to Change (Prochaska, Velicer, Fava, Rossi & Tsoh, 2001; Velicer et al., 1993; Velicer & Prochaska, 1999) program is based on the Transtheoretical Model of Change (Prochaska, & DiClemente, 1983). This model describes how individuals can modify problem behaviors and acquire positive behaviors. In this smoking cessation program, smokers complete questionnaires that are used to classify the smoker into one of five stages of change,<sup>1</sup> and information on recent failed quit attempts is collected. The treatment takes the form of an

<sup>1</sup> These are Precontemplation, Contemplation, Preparation, Action, and Maintenance; see Velicer et al., 1993.

individualized report that includes information on individuals in the same stage who went on to successfully quit smoking, strategies the subject can use to progress to the next stage, and if indicated, relapse issues associated with a failed quit attempt. When the treatment strategy is time varying, that is, individuals are assessed repeatedly over time, the reports also include indications of the progress the smoker is making through the stages of change. The tailoring variables include the stage of change and recent failed quit attempts. Similarly Kreuter and Strecher (1996) evaluated a one-time intervention that involved individually-tailored feedback to a health risk appraisal. Subjects completed a questionnaire that included assessments of a wide range of health-related behaviors such as smoking and exercise, and perceived barriers and benefits of the health-related behaviors. Each subject's answers to the assessments served as the tailoring variables. These answers were used to select printed behavior change information targeted at the individual's health risks and perceived barriers to behavior change. The rationale behind the tailoring in these expert system approaches is that selected, personally relevant information will be attended to and thoughtfully processed, and thus will be more efficacious (Kreuter, Strecher & Glassman, 1999). Another example of an adaptive treatment is the Systolic Hypertension in the Elderly Program (Borhani et al., 1991; SHEP; Cooperative Research Group, 1988). Lavori, Dawson, and Rush (2000) present the rationale in designing adaptive treatment strategies for use in treating mental illness.

#### *Why use an Adaptive Treatment Strategy?*

Adaptive treatment strategies are promising alternatives to fixed treatments whenever subjects are heterogeneous in their need for treatment. In order to optimize response, the type or dosage of treatment should vary by subject. In psychiatry, for example, some subjects respond well to medication alone, whereas other subjects may require psychotherapy to respond well. Adaptive treatment strategies are also promising alternatives to fixed treatments whenever subjects are heterogeneous in their response to treatment; for example, some may respond best to a high level of treatment, others respond best to a low level of treatment, and some will respond best to longer periods of treatment rather than shorter. Heterogeneity in need is common in the management of chronic relapsing disorders (e.g., addictions, mental illnesses) because some individuals can go long periods without treatment and maintain health, whereas others require more frequent treatment to maintain their health. If the treatment is expensive, either in staff or subject time or money, adaptive treatment strategies can be used to reduce waste by avoiding giving low-risk individuals a higher dose when a lower dose would have been as effective. We would consider using an adaptive treatment strategy when there are several useful interventions, all equally efficacious but differing in the type of side effects or demands on the subject. In these cases, adherence or lack thereof may be the difference between an effective treatment and ineffective treatment. One potential way to increase adherence is to tailor the treatment to the subject's preference. As mentioned above

another important reason to use an adaptive treatment strategy is to avoid side effects due to over treatment. Such side effects can be obvious and life threatening, as in the overdose of a medication. However, often the side effects are subtle. For example, in a multi-component intervention, attempting to provide too much of one component may result in reduced adherence to other components of the intervention, and thereby reduce the overall efficacy of the multi-component intervention.

#### *When should we consider an adaptive treatment strategy?*

We should consider an adaptive treatment strategy whenever significant moderators of the effect of the treatment are available. These moderators can serve as tailoring variables in an adaptive treatment. The list of potential tailoring variables is almost endless, and naturally will depend on the study. Potential tailoring variables include both time invariant and time varying individual, family, or contextual characteristics that represent risk or protective factors that influence responsivity to (or need for) various types or intensity of treatment. Potential tailoring variables also include proximal outcomes measuring treatment responsivity or mediators of treatment. For further elaboration and explanation of the relationship between moderators and tailoring variables, see Collins et al. (2002). For example, if some individuals (e.g., those characterized by high values on the tailoring variable) will not respond to low levels of a treatment but will respond to higher levels, whereas others (e.g., those characterized by low values on the moderator) will respond about the same, or even better, to low levels as they will to high levels, an adaptive design allows for cost-effective and efficient delivery of different levels of treatment to these groups.

If in a given situation we are uncomfortable with the implicit assumptions or requirements made by using a fixed treatment strategy, we would consider adaptive treatment strategies. Some of these assumptions follow. In using standard or fixed treatment strategies, we assume that although individuals may have different treatment needs, the treatment is in no way diluted or made counterproductive for an individual, if components that are particularly relevant for that individual are embedded in components that may have less relevance. In a fixed treatment strategy all subjects receive the same dose of treatment; we assume that side effects from overtreatment are minimal. Therefore, fixed treatment can be appropriate if the concentration of services is not counterproductive in some way. However, fixed treatment strategies may be prohibitive from an economic standpoint, even if they do not "harm" some patients through overtreatment. Indeed, a requirement of a fixed multi-component treatment is that all components must be delivered to all subjects, thus often treatment components that are expensive in terms of money, expertise, time, or logistics cannot be included. Certain treatment components that could help some individuals might not be included because they would have a harmful effect on other subjects. For example, some individuals might benefit from additional counseling, but if an attempt were made to administer this to all subjects,

those who do not need the counseling would forgo other opportunities, such as participation in pleasurable social or recreational pursuits, mutual support groups, or other health promoting activities. In addition, such individuals may drop out of the study, thus depriving them of the benefits of other treatment components.

### Designing Adaptive Treatment Strategies

In designing and evaluating an adaptive treatment, we have two primary goals. These are first to maximize the strength of the adaptive treatment strategy and second to maximize replicability. The first goal is obvious. The second goal is less obvious and thus requires some discussion. Replicability means that when a study is repeated on different samples, the same population-level treatment effect is being estimated in each sample. The idea of replicability is an important one in the evaluation of treatment effects. We have the most confidence in a treatment when its effects are replicable with different experimenters, different clinical staff, and different locations. One aspect of replicability is what Flay (1986) has termed "effectiveness," the ability of the treatment to maintain the desired effect under real-world implementation conditions. This is the ultimate goal of most treatment researchers.

Replicability in an adaptive treatment strategy is closely linked to fidelity of implementation of the decision rules. When the rules in an adaptive treatment strategy are not well implemented, there is a resulting reduction in replicability. This is because it is possible to attribute the obtained results to factors other than the treatment. These factors are called alternative explanations. These alternative explanations stem from lack of specificity or clarity concerning the adaptive procedures, or unknown or known reasons why there was implementation infidelity. Suppose in one study, clinical staff occasionally use considerations other than the established decision rules to make dosage/treatment assignments. This means that we are unable to attribute any treatment-control differences (or lack thereof) solely to the treatment; differences may be due in part to any undocumented and unplanned procedures followed by the clinical staff. To the degree that clinical staff in all other implementations of the treatment strategy do not make use of these same considerations, the results obtained in this study will not be replicable. The principles outlined below can be used to establish clear definitions of fidelity, thereby helping researchers to encourage and maintain implementation fidelity and, by extension, replicability.

In order to identify some fundamental principles of the design of adaptive treatment strategies, we need to highlight an essential difference between fixed treatment strategies and adaptive treatment strategies with respect to what constitutes the treatment. In the adaptive case, the treatment strategy consists of not only the treatments, but the treatments inextricably coupled with the entire system for assigning treatment type and dosage. In other words, the choice of tailoring variables, the measures of the tailoring variables, the decision rules linking tailoring variables to treatment type and

dosage assignment, and the implementation of these rules *are a part of the treatment strategy*. (Note that according to this framework, individual staff, treatment sites, etc. are not part of the treatment strategy. Rather, they are sources of extraneous variance). Each of the following four parts of the treatment strategy are important: choice of tailoring variables, measurement of tailoring variables, derivation of decision rules, and implementation of the decision rules. Below we provide brief discussions of each of these parts (a more in-depth discussion can be found in Collins et al., 2002).

We maximize the strength of the treatment strategy by using appropriately chosen tailoring variables, measuring the tailoring variables well, and by using appropriately chosen decision rules. We maximize replicability in future experimental and real-world implementation conditions by clearly specifying the treatment strategy (tailoring variables and decision rules) and by maximizing implementation fidelity.

#### *Choice of tailoring variables*

The identification of key individual (or group) characteristics that would be associated with different responses to treatment outcome in a fixed treatment and that can serve as tailoring variables is an important factor leading to a strong adaptive treatment strategy. In the case of preventive-interventions, key risk and protective factors and indicators of the developmental processes associated with the maladaptive behavior are all potentially useful tailoring variables. Other potential tailoring variables are mediators of the treatment or proximal measures of distal outcomes.

Consider the family counseling component of Fast Track (Conduct Problems Prevention Research Group, 1992, 1999a, 1999b) again. Recall that the goal of Fast Track was to prevent conduct disorders in high-risk children. This program is based on longitudinal research that suggests the developmental course of conduct disorders involves the interaction of multiple risks, including child characteristics, parenting difficulties, community factors, and academic and social maladjustment (Dodge, Bates, & Pettit, 1990; Offord, Alder, & Boyle, 1986; Patterson, Capaldi, & Bank, 1991). Any one family and child may exhibit only some of the risks. The purpose of the family counseling component is to address the parenting difficulties and general family functioning. Past family functioning was expected to moderate the effect of family counseling on later child behavior.

It was expected that families with a high level of problems would benefit from intensive family counseling and that this level of intensity was needed to promote positive intervention effects. In contrast, for families with few of these problems, it was anticipated that less family counseling would be sufficient to promote positive child outcomes, and higher levels might have a negative impact (e.g., stigmatizing families, reducing parent self-efficacy, fostering dependence on home visits for solving everyday problems). An additional risk was that families might feel burdened by family counseling they felt were excessive and intrusive, fueling resentment of the program and reducing participation in other intervention components, thereby reducing intervention effects. Hence, the optimal impact of intervention was expected when the

level of family counseling was tailored to the time varying level of family functioning, avoiding the potential loss of intervention effects associated with insufficient or excessive home visiting. During intervention family functioning was expected to mediate the effect of past family counseling on later child behavior, thus family functioning is indicative of responsivity to the intervention.

Next consider the addiction management study for alcohol dependent subjects. A primary outcome is percent heavy drinking days and the treatment strategy is to increase from naltrexone medication alone to naltrexone plus the more comprehensive behavioral treatment protocol (e.g., CBT), on the basis of a measure of heavy drinking (number of heavy drinking days within a defined period). There the tailoring variable is a proximal outcome. The rationale is that heavy drinking days are indicative of responsivity to treatment and should be used to decide if the treatment should be changed. Contrasting the two examples, we see that in the family counseling component a moderator/mediator, family functioning, is the tailoring variable, yet in the addiction management study, a proximal measure of the primary outcome is the tailoring variable. Although proximal measures of the primary outcome of conduct disorder, such as teacher ratings of daily oppositional-aggressive behavior, were available, these proximal measures were not used as tailoring variables in the assignment of family counseling. This is because not all children with problem behaviors come from families with the risk factor of family problems and parenting difficulties; such children exhibit deficits in other domains such as social and academic functioning. Thus a high level of oppositional-aggressive behavior does not necessarily indicate family problems and the need for family counseling.

These two examples also highlight an additional important factor in designing adaptive treatment strategies—whether changes in treatment are made proactively or reactively. Ideally, it is better to adjust treatment to optimal levels before a “bad” initial outcome occurs. This approach is taken in the Fast Track example, where intensity of family functioning is determined by family functioning. However, this requires a strong theory or prior research findings that point to tailoring variables with high sensitivity and specificity as markers of future outcomes. In the case of naltrexone, such predictors of response to this medication have not yet been identified. Therefore, the addiction management protocol had to make use of proximal outcome variables to determine whether changes in treatment were warranted—a “reactive” rather than proactive approach. Note that like Fast Track, the expert systems approach in smoking cessation also uses strong theory to identify markers of future outcomes (e.g. stages of change) and uses these markers as tailoring variables.

#### *Measurement of tailoring variables*

Every dosage assignment decision made about an individual in an adaptive treatment strategy begins with the individual's value on the relevant tailoring variable. To the extent that the tailoring variable is well measured (and the theory is correct), the appropriate dose of the treatment will be

assigned; to the extent that the tailoring variable is measured poorly, it is possible that inappropriate or even insalubrious doses will be assigned. The quality of the measurement of tailoring variables in an adaptive treatment strategy is critical.

In some settings, the tailoring variable may be relatively straightforward to measure, such as whether a urinalysis is positive for opiod use. However in many studies, the tailoring variables are more difficult to measure. Take for example, the measurement of number of heavy drinking days. In order to produce a reliable and valid measure of number of heavy drinking days, it may be important to corroborate self-reports of heavy drinking by using reports by the spouse or significant others or biological measurements, such as blood or breath tests. Sometimes the tailoring variables are of considerable theoretical interest quite apart from their role in treatment assignment; they may play the role of a mediator or intermediate outcome, and therefore the researchers have already thought through how best to measure them. However often well-established measures of important tailoring variables may not be available, and research is needed to develop reliable and valid measurement instruments. An important constraint is that results from assessments that yield tailoring variables should be available rapidly, so that decisions regarding therapeutic dosage can be made in a timely fashion.

#### *Derivation of decision rules*

The decision rules form the basis for assigning the optimal dose or type of each treatment component to each subject, based on that subject's values on the relevant tailoring variables. With effective decision rules, each component of the intervention is delivered in the intended intensity to the intended individuals. With ineffective decision rules, some individuals will receive an inappropriate dosage of some components, or possibly even an inappropriate treatment. Thus ineffective decision rules reduce the effectiveness of adaptive treatment strategies.

There are three important characteristics of good decision rules. First, such rules are based on an accurate model of the relations among tailoring variables, treatment dosage, and outcome. The clear and thoughtful articulation of this model is very important. Second, good decision rules are objective. They clearly operationalize the type of treatment and dosage to be given and the value (or range of values) on the measure of the tailoring variable. For example, a decision rule that states “individuals who return to heavy drinking should receive CBT in addition to naltrexone” is insufficient; a better decision rule states “individuals who experience greater than one heavy drinking day within a two month period after 10 consecutive days of taking naltrexone medication during the first month should receive weekly CBT in addition to naltrexone.” This statement contains an operational definition for the rule connecting the tailoring variable (days of heavy drinking) to treatment (naltrexone plus CBT) and the dosage of treatment. Third, good design rules are as comprehensive as possible, covering anticipated situations that can occur in practice, including situations where the measure of the tailoring variable is missing or ambiguous.

As has been discussed above, the philosophy underlying adaptive treatment strategies is that a given treatment will not have the same effect for all individuals. Instead, for a given treatment, individuals with certain values of the tailoring variable will enjoy a more beneficial treatment effect, or receive a less beneficial effect, than individuals with other values. Another way to think of this is that in order to achieve a particular desired treatment effect, different dosages or types of treatment may be needed for different individuals.

Consider the addiction management study for alcohol dependent clients. In order to derive the decision rule relating the tailoring variable (number of heavy drinking days) to the timing of a step up in treatment from the medication naltrexone to naltrexone + CBT, researchers used the results of past trials. In the past trials, clients who experienced more than one heavy drinking day within the first two months while taking naltrexone rarely, if ever, improved if maintained on the medication alone (unpublished data, personal communication from David Oslin, Treatment Research Center, University of Pennsylvania). This led to the rule: as soon as the client experiences more than one heavy drinking day (within first two months) then the more comprehensive behavioral intervention is added to naltrexone treatment.

In general, prior research is particularly valuable in articulating the decision rule, but it is not the only appropriate source of information because in many areas there will be little or no prior treatment research to draw upon. Other sources likely to be helpful are scientific theory in the area and prior clinical or treatment experience. In most cases, the task of articulating the model will require gathering any and all available information, assembling the research team and clinical staff, and carefully thinking through and discussing, "If we were to give this dosage to people with this characteristic on the dosage moderator, what treatment effect would be expected?" (see Collins et al., 2002, for further discussion).

#### *Implementation of decision rules*

The final link in the chain constituting an adaptive intervention is the optimal implementation of the decision rules. The optimal way to implement decision rules is universally, in other words, to apply them consistently across study subjects, time, implementation site, staff member, and every other set of circumstances, so that the decision rules are applied identically to any subject with the same values on the tailoring variables. In an optimal intervention design, design rules are established before the intervention begins, so that there is no variability or "drift" in how they are carried out as a study progresses. Another important implication is that when decision rules are optimally implemented there are no changes or exceptions made on an ad hoc basis. In suboptimal implementation of decision rules, some persons are treated differently from others, because the dosage assignment is based in part on factors that do not figure in the decision rules and may be unique to a certain individual, time, or situation. Suboptimal implementation of decision rules can introduce random error into the treatment, thereby lessening its effectiveness. It also can introduce unknown, systematic

error into the treatment, thereby reducing our ability to replicate the comparison of the adaptive treatment strategy with other conditions.

Suboptimal implementation may occur for many reasons. Clinical staff may perceive that the decision rules are inappropriate or less appropriate in a particular case due to extenuating circumstances. Important tailoring variables may be omitted or the decision rule uses the tailoring variables in an inappropriate way, or the tailoring variable is poorly measured so that staff perceive that the tailoring variable does not emphasize the appropriate aspects of client need. Staff may also feel that the design rules were stated ambiguously, or due to insufficient training or supervision, the staff may lack a clear understanding or acceptance of the rationale for the decision rules. The last reason indicates a need for additional staff training and supervision, or clarification of the rules whereas the prior reasons indicate a need for a change to the decision rules themselves.

One approach to deal with staff deviation from the decision rules, is for the research project to hold regular meetings of the scientific and clinical staffs, on an ongoing basis, for the express purpose of discussing cases in which staff wish to deviate from the decision rules. This requires staff to present a carefully thought-out argument on why the rule should be not followed for a particular client. In many cases, this will lead to clarification of the decision rules. In some cases, the scientific and clinical staff may be convinced that it is necessary to make an exception to these rules. If a careful log of such cases is kept, including a detailed explanation of why an exception was made, this information can be used to describe the implemented treatment with the aim of maintaining replicability, by using it to make sure that the same procedure is followed in any future implementations of the treatment. Furthermore, the information in this log will be helpful in fine-tuning the decision rules for future studies. However, to the extent that individuals with the same tailoring variable values are assigned treatment dosage and type by relying on ad hoc procedures rather than the established decision rules, there will still be problems with replicability. The log will help to assess the extent of the problem, and possibly to prevent it in the future, but will not help to ameliorate it in the current study.

#### **Summary and Future Directions**

As discussed here, adaptive treatment strategies are an exciting and potentially very powerful approach to optimizing treatment. These adaptive strategies represent a vehicle whereby scientists can seek to improve the tailoring of treatment and dosage used in clinical practice. In comparison to fixed treatment strategies, adaptive treatment strategies utilize the heterogeneity in response to treatment to increase potency, improve adherence, reduce side effects, and reduce waste. Certainly as treatment and prevention programs move in the direction of more comprehensive, multi-layered systems, adaptive components should become more common. At the same time, adaptive treatment strategies raise considerable scientific and methodological challenges. A challeng-

ing and contentious issue is the degree to which clinical judgment should be incorporated into the decision rules. Research is needed to identify the best ways to utilize clinical judgment: should this primarily be in the formulation of the rules? and/or should clinical judgment be a tailoring variable? and/or should the rules explicitly allow for clinical judgment? There is little research on this in the context of adaptive treatment strategies (see however Breslin, et al., 1997). Research is needed to build an empirical literature that can provide guidance in areas such as the identification of powerful tailoring variables and the development of measures that can serve as reliable and valid indices of these tailoring variables in the course of repeated clinical assessments. Research is needed on how we can better design and analyze experimental trials for identifying powerful tailoring variables and estimating the best decision rules so as to optimize response (for an analysis method see Murphy, 2002). Fulfilling the potential promise of the adaptive treatment strategies will require innovation and technological refinement, with thoughtful conceptual articulation and careful empirical evaluation.

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## APA Science Directorate Column

### Service to Psychological Science

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Every summer at the APA convention, staff from the Science Directorate and Science Public Policy Office visit with Division executive committees to exchange updates on activities and to hear about concerns and current issues. A theme echoed at almost every meeting is that we would all like to work more closely on scientific issues. There are plenty of these – funding, IRB regulations, dissemination of research findings, public perception of science, attracting students, and so on. Although we publicize activities broadly in both electronic and print forms, Division members, the lifeblood of our organization and our work, often do not feel well informed about APA's efforts on behalf of science. We hope to help remedy that with this column, which we intend to be a regular feature from the science staff at APA to you. Our column will not be a list of activities – you can find this in the "Division Dialog" part of your newsletter. Rather, we will tell you about our current hot-button topics and substantive issues and invite your input, participation, and feedback.

The topic of this first column should be familiar to you: getting our colleagues and students to value and participate in service to psychological science – as reviewers for grants and manuscripts, as panelists for policy, funding and advocacy initiatives and programs, as spokespersons to policy makers and to the public, and as committee members, officers, and ad hoc participants in organized academic and professional activities. The Board of Scientific Affairs (BSA) began discussion of this issue at its last meeting. Their discussion was fueled by a concern that unless scientists actively engage in service to psychology as a discipline, policies, regulations, and the very future of the field will be determined without input from the scientific community.

Why is service by scientists an issue and why is this an opportune time to address it? There are many answers to this question, all of which boil down to the plain fact that it is devilishly hard to get psychological scientists to agree to serve on boards, committees, workgroups and other bodies that address policy and action at a discipline or even sub-discipline wide level. Such activities, as well as activities such as sitting on departmental or university committees or on the university's IRB or other oversight group are typically not valued and not rewarded.

We all know why – in the life of an academic researcher, research and teaching are high on the list, and service to the discipline or to the institution takes time away from these more heavily rewarded activities. These priorities at the individual level are mirrored at the institutional level – we frequently hear how little service activities are valued by those who hold salary, rank, and tenure decisions in their hands. Because of this seemingly rigid reward structure, we also hear that we are foolhardy to think that we can change the scientific community's attitudes and commitment to service at the local and national level.

Well, foolhardy we may be, but we believe that the future of our science and discipline depends not only on producing good science but also on producing good leaders in our professional organizations and funding agencies. We need scientists who are willing to advocate for strong psychological science. We need scientists who are willing to take leadership roles in the institutions that regulate us, organize

us, and fund us. We need scientists who are willing to bring their expertise and perspectives to organizations like APA.

So what can you do? BSA and the Science Directorate intend to begin dialog at several levels – with department chairs, with university administrators, and with individual scientists at all levels of seniority to explore opportunities for and barriers to service, and to explore strategies to create a culture in which service is more highly valued, especially among graduate students and new faculty. BSA also wants to have a dialog with you — Division members and Division leaders. We know there is variability across institutions in the extent and ways that service is valued and rewarded, and we want your help in culling practices from those institutions that do manage to make service a feasible and valued part of the academic research life.

This initiative was first discussed at Convention at a breakfast meeting with BSA members and with several Division presidents. The discussion focused both on ways to encourage scientist/academic division leaders to pursue leadership positions in APA (committees, boards, Council of Representatives and APA Board of Directors), and ways to encourage division members to be more active in broader service to the scientific community. Those of you who do work with Division or APA governance or with Science Directorate or Public Policy Office staff on substantive issues know that this is not an idle request. When we develop activities around research regulation and IRBs, animal care, testing and assessment, advocacy for funding, new research niches for graduate students, or mechanisms for educating the public about science, it is your input, concerns, and activities that determine the content. This service occurs when you respond to our requests for comment or expertise; it also occurs when you serve in APA governance – on Boards, committees, Council.

How can service be increased? One can imagine many mechanisms. Service to the psychological community could be inculcated into graduate education as part of what it means to become a psychologist - but this will only be successful when faculty are, themselves, good role models and good mentors, providing expertise and spending time on committee and other service work. Service to the psychological community can be encouraged if you, the members of divisions that care about research and science, help in identifying, recruiting, cultivating, and promoting prospective candidates for governance—at all levels, in APA and in other organizations. What many fail to realize is how important it is to be well represented throughout policy venues – where the actual decisions that affect research and researchers are forged. Becoming involved in this way is not a quick fix – it is a long-term project. For example, election to the APA Board of Directors, a group that is critical for charting APA's future, requires serving on Council first (not to mention getting known and being active in this body). The reluctance of the science/academic community to recruit and groom candidates for Council and APA Boards and Committees means that science is always underrepresented in these bodies. The few scientists who do service often wind up doing far more than their fair share.

It's not our intention to try to solve the problem in this column. We would like to alert you to the initiative, to get you to ask "what have I done for psychology lately" and to help BSA, the Science Directorate, the Science Public Policy Office, and the rest of the science community collectively to think about encouraging service to advance the field. Please send your comments and your feedback to us at [science@apa.org](mailto:science@apa.org).

## Division 12 Update

Sheila Woody, Ph.D.  
SWoody@psych.ubc.ca

There are two important sets of events occurring in Division 12 that pertain directly to SSCP and our mission. The first is the budget deficit the Division is experiencing, and the second is the ongoing debate over SSCP's public statements about the prescription privileges debate, which is reviewed in the President's Column.

The Division is running a serious budget deficit and needs to take drastic steps to correct the problem. The primary reason for the deficit appears to be a loss of membership, which was 4500 in 2002 compared to 5700 in 1997. Some of this drop in membership can be attributed to the formation of new divisions from former sections of Division 12. The deficit is not easy to address because it is so large (in the range of \$50,000). The Board has taken several steps to reduce expenses, including eliminating the spring Board meeting and moving other meetings to less expensive locations. However important these steps are, they will only address a small portion of the deficit.

Ideas that have potential to make a bigger impact on the deficit are not appealing. The Board is reluctant to raise dues for fear of driving members away (but it looks like that might happen anyway). The Division's single largest expense is the cost of the journal, *Clinical Psychology: Science and Practice*. There was discussion on the idea of letting the journal go when the current contract with Oxford University Press is concluded, but many Board members spoke against this idea, pointing to the journal (which has a very strong reputation) as the best and most visible contribution the Division makes to the field. Another option is to eliminate the newsletter, *The Clinical Psychologist*. The meeting concluded with no concrete plan for addressing the budget deficit.

What can SSCP members do to help? The Board would benefit from hearing members' thoughts about these various options for balancing the budget; how would you prioritize these suggestions? Feel free to convey your views to the SSCP Representative to the Board (Sheila Woody: [sw Woody@psych.ubc.ca](mailto:sw Woody@psych.ubc.ca)), or you can also communicate directly to any Division Board member. Their names are listed on the Division's website. SSCP members can also directly help by becoming members of the Division. SSCP members can choose to be Associate Members of the Division, even if they are not APA members. In addition, the Division would like to be able to offer an incentive for student members (or those who have recently received their degree). SSCP members who have recently written books can donate an autographed copy of their book to the Division to use in this way. Finally, SSCP members affiliated with a university can check to see if their library carries the Division's journal, *Clinical Psychology: Science and Practice*, and request a subscription if necessary.

## Call For SSCP Student Poster Submissions for APA 2004 in Honolulu, Hawaii

I am pleased to announce a Call for Papers for the SSCP annual student poster session to be held at the upcoming American Psychological Association convention in Honolulu, Hawaii (July 28 to August 1). As in the past few years, SSCP will be holding the poster session in conjunction with the Division 12 social hour. In addition, there will be a \$200 cash award for the best poster at this session.

Here are some very important specifics if you are interested in submitting a poster to this session:

(1) The deadline for submissions to the SSCP graduate poster session is Friday, May 21, 2004. We realize that this is somewhat short notice, but this deadline gives SSCP members approximately 2 months to prepare poster submissions.

(2) The eligibility rules for poster submissions are as follows: (a) the first author of the poster must be a graduate student AND (b) the graduate student must be a member of SSCP at the time of submission.

(3) The poster submission can deal with any area within scientific clinical psychology (e.g., the etiology or correlates of psychopathology, assessment/diagnosis, clinical judgment, psychiatric classification, psychotherapy process or outcome, prevention, psychopharmacology).

(4) The research and analyses presented in the poster submission must be completed (i.e., submissions containing such language as "Findings will be presented...." will not be considered).

(5) The submission must differ from accepted SSCP student poster session submissions to be held at APS this coming May.

(6) **To submit a poster to this session, please be sure to send me all of the following materials:** (a) Names, institutional or work affiliations, addresses, and contact information (phone, FAX, and - very important - e-mail addresses) of all authors on the poster; (b) a 50 word (maximum) Abstract. (c) a 300 word (maximum) description and summary of the study, including its theoretical rationale, methodology, analyses, and implications. This description and summary will be used by reviewers (who will be SSCP members) to evaluate the quality of your poster submission. Please be sure to provide enough relevant detail that so reviewers can adequately judge the originality of the study, the soundness of the theoretical rationale and design, the quality of the analyses, the appropriateness of the conclusions, and so on.

(7) To facilitate the evaluation of poster submissions within our time frame, please submit all poster materials to me electronically at [dsloan@temple.edu](mailto:dsloan@temple.edu). Poster submissions should be in a standard word processing format, preferably Microsoft Word. We will then send these submissions electronically to reviewers. Please be sure to keep an electronic back-up copy of your poster submission in the event of loss.

(8) If your poster submission is accepted, we will send you additional information regarding the preparation of posters for the APA convention. All poster presentations must fit within a 4' X 8' area. Thank you very much in advance. Once again, we very much hope that you will consider submitting a poster to our annual student poster session at APA. Please do not hesitate to contact me if you have any questions.

Denise Sloan

## Awards and Recognition

### Distinguished Scientist Award

The Executive Committee of the Society for a Science of Clinical Psychology (SSCP) has jointly awarded the 2004 SSCP Distinguished Scientist Award to

**Lyn Abramson, Ph.D.**  
**Lauren Alloy, Ph.D.**

Congratulations to them for this much deserved award. The award will be formally given at the APS meeting in Chicago.

### 2003 APS Student Poster Session Winners

#### Best Posters:

**Ellison Cale**  
(Scott O. Lilienfeld)

*Psychopathy Factors in Predicting Risk for Aggressive and Violent Behavior: A Test of the "Threatened Egotism" Hypothesis*

**Amee J. Epler**  
(Kenneth J. Sher & Kristina M. Jackson)

*Longitudinal Patterns of Abstinence and Drinking: Relation to Reasons For Not Drinking*

### 2003 APA Student Poster Session Winners

#### Best Poster:

**Lindsay M. Collins & Kara Biondo**  
(Jack J. Blanchard)

*Signs vs. Symptoms Approach to Assessing Schizotypy: An Examination of the Incremental Validity of a Behavioral Rating Scale*

### Dissertation Awards

**Anil Chacko**  
(William E. Pelham)

*The Treatment for Single-Mothers of Children Diagnosed with Attention-Deficit/Hyperactivity Disorder: A Comparison Between a Traditional and an Enhanced Behavioral Parenting Program*

**Gail H. Chang**  
(Lauren B. Alloy)

*Lifestyle Regularity and Affective Symptomatology in Individuals Exhibiting Cyclothymic Symptoms*

**Rebecca E. Ford**  
(Kathryn Grant)

*Acculturation and Problem Behaviors of Latino Youth: A Developmental Perspective*

**Amy Przeworski**  
(Michelle Newman)

*The Efficacy of Internet-based Treatment for Children with Anxiety Disorders*

**Jennifer A. Steinberg**  
(Lauren B. Alloy)

*Implicit and Explicit Self-Esteem Level and Reactivity as Predictors of Depression*

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