PEER MENTORING RETREATS FOR ADDRESSING DILEMMAS OF SENIOR WOMEN IN STEM CAREERS

The Nag's Heart Model

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Researchers and practitioners know that mentoring relationships can help both individuals and organizations change and prosper (Allen, Eby, Poteet, Lentz, & Lima, 2004; Eby et al., 2013; Eby, Durley, Evans, & Ragins, 2006). As some chapters in this volume emphasize, those who become leaders have often benefited from having been mentored; and from the research presented in other chapters, we conclude that good mentoring programs can serve leaders who wish for their organizations to make the most of all the talent available (see also, Gentry, Weber, & Sadri, 2008).

The current chapter examines one small but highly effective mentoring program that has focused on fortifying feminists and has thus helped create and sustain change among people, processes, and paradigms. The chapter starts with a brief critique of traditional mentoring forms and discusses newer formats including “mentoring circles.” It then moves to a detailed description of the particular mentoring program known by the curious name of Nag’s Heart in which mentoring circles are formed and run according to a strict protocol. The third section of the chapter presents evidence on the effectiveness of Nag’s Heart using data from a recent study of women in the academic fields of Science, Technology, Engineering, and Math (STEM). In the final section, we point to implications of the Nag’s Heart model for how one might think about the role of mentoring circles like the Nag’s Heart model, in multicultural, multi-gender contexts.
Traditional Mentoring Structures: Impact and Pitfalls

There is no doubt that mentoring is effective for career development and success, but a one-size-fits-all mentoring model may not be ideal. The traditional model of mentoring is characterized by a dyadic relationship differentiated by status in which the benefits of mentoring flow from an experienced, senior individual who shares his or her wisdom, advice, and sponsorship with a younger, inexperienced but high-potential protégé (Holbeche, 1996; Kram, 1985). Mentors also experience enhanced career success, organizational commitment, and job performance from their mentoring activities (Ghosh & Reio, 2013). Mentoring relationships develop over time and tend to follow predictable developmental stages (Kram, 1985). Career and psychosocial benefits for the protégé tend to be strongest when such relationships develop naturally or informally, but high-quality formal mentoring programs in which mentors and protégés are matched also lead to positive outcomes compared to non-mentored individuals (Murrell, Blake-Beard, Porter, & Perkins-Williamson, 2008; Ragins & Cotton, 1999).

Good as they are, traditional forms of mentoring have been criticized for a variety of reasons (Kram & Higgins, 2008). Relying on a single mentor may prove ineffective in complex environments, where the answers to important organizational and career dilemmas cannot be answered by one person (Kram & Higgins, 2008). Finding suitable mentors may turn out to be difficult for individuals from demographic groups who are highly under-represented in their occupations (particularly women and minorities; Cox, Blaha, Fritz, & Whitten, 2014), especially given the tendency for homosocial reproduction (Darwin, 2000; Darwin & Palmer, 2009; Hansman, 2002). Conflicts may arise from the disparate goals and expectations of mentors and protégés, especially perhaps when one member of the power-asymmetric pair comes from an under-represented group or a group that is new to the organization.

Given the importance of similarity in attraction, spontaneously formed mentoring dyads often involve individuals who resemble each other on demographic characteristics and thus end up privileging those who are already privileged by virtue of their gender or ethnicity (Darwin, 2000; Hansman, 2002). Women and ethnic minorities can experience difficulty in finding suitable mentors whom they trust (Cox et al., 2014). Mentors and protégés may have different, if not conflicting goals for self-advancement. Sometimes protégés feel disrespected, abused, or otherwise diminished by their associations with a senior person who was meant to be their mentor (Eby, McManus, Simon, & Russell, 2000). Finally, the traditional mentoring model reinforces the structure of paternalistic power hierarchies that ultimately sustain the subordination of women and minorities (Darwin & Palmer, 2009).
Alternative Mentoring Models

Alternative mentoring models have flourished, including inter-organizational mentoring, peer mentoring, mentoring networks, and group mentoring. Inter-organizational mentoring programs (see Murrell et al., 2008) match mentors and protégés at professional conferences, training programs, or workshops and provide guidance to dyads on ways to facilitate their mentoring relationship over time and space. Such programs have been found to be particularly beneficial for persons of color who typically cannot access powerful same-race/same-gender mentors within their own institution (Murrell et al., 2008).

Peer mentoring models address the concerns of power differentials in traditional mentoring relationships, and are considered especially useful to help women combat under-representation, isolation, and lack of support in STEM fields and careers (Amelink, 2009; Cox et al., 2014; Langdon, 2001). Whether dyadic or group-based, peer mentoring functions flow two ways and are mutually beneficial when they involve enhanced career and psychosocial support including coaching, career strategizing, information sharing, counseling, and professional-development role modeling (Amelink, 2009; Holbeche, 1996; Kram & Isabella, 1985). This type of mutual relationship is thought to be especially impactful in developing competence, responsibility, and career identity for all members of the peer mentoring relationship (Kram & Isabella, 1985).

One form of peer mentoring is the mentoring circle (Dansky, 1996) in which a group of colleagues, guided by a facilitator, provide feedback, advice, and support to each other (Palermo, Hughes, & McCall, 2010). Most mentoring circles include one or two members who are senior in their organizations or professions and eight to twelve junior members. Sometimes a separate facilitator helps run the mentoring sessions. Sometimes members take turns running the group or facilitating discussions. Mentoring circles are especially useful when people’s “lived experiences” (as opposed to their conceptual understandings) are important and when demographic characteristics are likely to influence the lived experiences of people in an organization. If, for example, women experience subtle shunning in an organization, a circle composed exclusively of women will discuss the issue of subtle shunning in a different (and deeper) way than a circle in which women are in the minority.

Perhaps the first published report of a mentoring circle came from Ellen McCambley (1999). McCambley reported on her experiences in setting up and helping to run a program for women who worked in a telecommunications company in New England. Because there were only a tiny number of women in senior management at that time, the decision was made to set up ten mentoring circles that met regularly over a one-year period. The pilot project was not without some mishaps, but overall the project proved to be a huge success. At the close of the year, eight of the ten groups elected to continue to meet on their own time. Very high levels of mutual trust were established. “For the first
time," reported McCambley, "we had an old boys' network among the girls" (McCambley, 1999: 179). Even more importantly, organizational changes were implemented. Some were small and easy to effect—like cordoning off a section of the women's room as a nursing station. Others, like a program to identify young talent among diverse populations and help that talent accelerate through the ranks, were harder to implement and more far-reaching. A reported downside to mentoring circles has been difficulty in sustaining the momentum and commitment to membership in the group (Darwin & Palmer, 2009).

The benefits of implementing mentoring circles in a business setting (McCambley, 1999) have also been reported more recently in academic settings. Darwin and Palmer (2009) and Palermo et al. (2010) reported on mentoring circle programs instituted at Australian universities. In both studies, groups were composed of junior faculty or practitioners led by a senior professional or facilitator. Groups determined what topics they would pursue such as learning competencies, research support, building collaborations, managing work/life balance, and other career development issues. At the end of the program, participants regarded their opportunities to interact with others, to engage in peer mentoring, and to share experiences to be the most valuable benefits of the program.

The Nag's Heart Model

An organization that has made intensive use of mentoring circles is Nag's Heart. Nag's Heart retreats have been held since the early 1990s, with about ninety retreats held to date. Currently, the term "Nag's Heart" refers both to an organization and to the retreats sponsored by the organization. As we describe below, Nag's Heart retreats embody the essential elements of status attenuation, mutual support and trust, and network enhancement found in peer mentoring models and mentoring circles. Moreover, Nag's Heart retreats are commonly inter-organizational in structure, providing access to powerful colleagues and their networks, which is particularly important for traditionally marginalized professionals, such as women in science, engineering, and math, as well as for under-represented minorities in almost all disciplines (Murrell, et al., 2008).

As an organization, Nag's Heart has evolved rather organically and at times a bit haphazardly. Take the strange name. The name came about after the organization had been functioning for a couple of years and members felt the need for a moniker other than "meeting at Faye's place." One member of the group, a professor named Louise Kidder, offered "Nag's Heart" as the name because the very first meeting occurred when some members appeared to have been excluded from a small scholarly retreat program situated in Nag's Head, North Carolina. It seemed at the time that the Nag's Head retreats embraced strict hierarchy and shunned the core concepts of feminism, and thus group members cheered Louise Kidder's idea of replacing the word "head" with the warmer
word of “heart.” Now, more than twenty years since the first retreat was held, virtually all those who have participated in a retreat seem to resist the suggestion—regularly put forward by others who have not yet been to a retreat—to change the name to something less easy to confuse with either old female horses or the practice of harping on something.

In 1997, Nag’s Heart found a home at the University of California, Santa Cruz when one of the founders of Nag’s Heart (FC) joined the faculty there. Soon an endowment was established, and by the mid-2000s a “leadership collaborative” (LC) was formed. By-laws came into being as did a sometimes outdated website. At around the same time, the processes of facilitating a Nag’s Heart retreat were more or less solidified.

Nag’s Heart currently hosts two to six workshops or retreats in a given year. In each retreat a group of six to fourteen individuals meet over a period of one to four days to tackle together their dilemmas concerning a specified topic. The length of any specific workshop is determined by the needs of the participants. All participants need to be present for the entire time. Given the press of work and other demands on many women, meetings are frequently shorter (one to two days) than one might wish in an ideal world.

Topics that have been addressed in meetings include: ethical issues in research; balancing home and work; spirituality in academia; ethnic diversity among feminist academics; feminist agendas in the law; and detecting and resisting sexism. Every topic is one that touches feminists, defined as those who care about equality for women and men. Every topic can be approached from both a personal and a professional vantage point.

Once a retreat is approved by the LC and a convener is identified, announcements are sent out via professional networks. Retreat organizers take care to make sure that everyone invited knows the “rules of engagement.” Unlike the standard professional retreat, a Nag’s Heart retreat involves a great deal of interdependence, and organizers make sure that all potential participants are prepared to be wholly present for the duration of the retreat.

Those invited to attend a retreat are informed that the retreat will revolve around each participant coming with a dilemma and will follow a structured format. Cell phones and laptops are to be left at the front door. No PowerPoint presentations are allowed. In addition, each participant is told that the group eats together and, if time permits, engages jointly in free-time activities. For overnight retreats, sleeping arrangements often entail “bunking” with one or more participants. Funding for each Nag’s Heart conference is typically a combination of participant fees, which may be supported by her home institution, and a Nag’s Heart Foundation fund built up by donations from past participants.

For each retreat a list of participants and alternates is made. Names and institutional affiliations are exchanged in advance of the meeting. Travel arrangements are coordinated. Every attempt is made to help the participants feel “pampered but not spoiled.” Individuals are treated as individuals, but everyone
is reminded gently of the interdependence of all members of the group. If one
participant's plane is late to arrive, for example, the others in her van need
to wait.

Once the group assembles, we strictly follow procedure so as to allow the
magic of a group to emerge. After an initial introduction of each individual's
problem or situation she would like to discuss, the facilitators of a Nag's Heart
retreat create sessions on the basis of issue similarity (loosely defined). All partic-
ipants of the Nag's Heart are present for every session, and they agree to be fully
engaged.

At the start of the first session (and the start of subsequent sessions as needed),
the group facilitator states the rules. First, everything is confidential. Second,
everyone is present for all parts unless prior arrangements are made. Third,
everyone needs to promise to speak only the truth. No lies, white or otherwise.
Fourth, no one should feel compelled to say anything that she or he does not
want to say. Thus, even though everyone speaks only the truth, no one is obli-
gated to speak "the whole truth." That is, while a participant may not want to
reveal the whole story or situation, what she says must be truthful. Following
these rules is essential because trust is at the core of all exchanges. Even with all
the chauffeuring and tailor-made cuisine, the greatest luxury of any Nag's Heart
retreat is the ability to speak the truth and to know that everyone else is speak-
ing the truth. Trust—that basic element of any healthy life (Stroh, 2010)—is a
cherished asset of every Nag's Heart retreat.

A typical session during a workshop focuses on three participants. Each indi-
vidual participant has thirty minutes in which to present her dilemma and
receive feedback on it. She may use a small portion of the time to present her
dilemma and use the remaining time to get feedback and dialogue from the
group; or she may spend most of her time describing her dilemma with little
time for group input. The choice is hers. When the timer goes off after thirty
minutes, the conversation on her dilemma ends.

In any session, after all participants have spoken, there is a thirty-minute
"bucket" session. In the bucket session, the entire group can return to any of
the participants' issues and provide further input or discussion, and/or identify
common themes among dilemmas and strategies for addressing them. Knowing
that the bucket session will allow for a return to interrupted thoughts, the
retreat facilitators can be strict in cutting off conversations when the timer goes
off and participants can feel relaxed that they will be able to complete their
incomplete thoughts.

The next session begins after a break, which can be brief or extended. During
extended breaks, meals may be served and/or free-time activities may
be offered. Free-time activities typically include hikes, visits to local attractions,
yoga, massage, or time alone.

In a one-day Nag's Heart retreat, we typically seek to keep attendance to
nine or fewer participants. In a multi-day Nag's Heart retreat, we can go as high
as twelve or even fourteen participants and try to keep the sessions to only two per day. Multi-day retreats seem to have more impact than one-day retreats; but even a one-day retreat can have a special effect.

When all of the sessions have been completed, the group reconvenes for a final ceremony. During this ceremony, the timer is turned off, but a strict protocol is still followed. The ceremony is based on a Native American practice introduced some years ago by a participant named Candace Fleming, a Native American psychologist who worked with Native American populations. First, the facilitator reminds the group of the rules of confidentiality, honesty, and trust. Then the facilitator explains the process. During the closing ceremony, participants sit in a circle and pass around a token (e.g., a rock, a feather, a glass heart) selected by the facilitator. Only the person holding the token may speak.

The token-holding speaker may reflect on what the Nag's Heart retreat has meant to her and what insights she has learned or she may reach out to a particular participant to say something personal to her. The token holder may also choose not to speak and to simply pass the token to the next person in the group. The token proceeds around the group with each person given as much time to talk as she likes. The number of circulations is not usually limited, and often the token goes through the entire circle ten or more times. The session ends when the token has made two complete passes around the circle with no one speaking. This signifies that all has been said and that closure has been met. A silent period of person-to-person expression of thanks ends the retreat.

It is clear that Nag's Heart retreats are similar to mentoring circles in many ways and also unlike most mentoring circles in other ways. The most notable difference between Nag's Heart and other mentoring circles concerns duration. While many organizations might have a mentoring circle in place for three to twelve months, the Nag’s Heart circles last one to four days. Nag’s Heart might be conceived as a “mentoring intervention” meant to jump-start some processes.

In other ways, Nag’s Heart retreats resemble what one might find in a corporation or university. Each retreat has a facilitator and either a co-facilitator, or a “helper” or both. The facilitator (typically the host) develops the sessions, helps to facilitate the dialogues within the session, and monitors the time. The co-facilitator also helps with the dialogues and handles other logistics. The helper typically manages the meals and snacks. Similar to a mentoring circle, the role of the facilitator and possibly co-facilitator is to explain the structure of the sessions, help maintain the flow of the dialogue, and keep the timer. On rare occasions, the facilitator has to help resolve interpersonal conflicts that might otherwise compromise the success of the Nag’s Heart process.

For Nag's Heart retreats, like most mentoring circles, the structure of the formal group sessions is intended to normalize the existence of problems or dilemmas and to reinforce that most problem-solving occurs in groups. Every attention is given to the building of trust, because without trust, mentoring
efforts are doomed to failure (Thomas, 1990). Nag’s Heart retreats go further than most mentoring circles in the effort to attenuate status differences. The rigid structure of the sessions is important: All participants get the same amount of time in which attention is focused on their problem. All participants focus fully on each participant’s issue during the allotted time. Participants who may hold more junior positions in their occupations are relieved of the burden of deference, and participants holding more senior positions are relieved of the burden of being wise elders to care for younger colleagues. Indeed, usually within the space of the first hour, the junior-senior distinctions tend to fall away without losing the wisdom of the senior members.

The Effectiveness of Nag’s Heart Retreats for Women in Academic STEM Fields

Since its inception, Nag’s Heart has attracted psychologists and related social scientists—reflecting the discipline of its founding mothers, but recently the focus has expanded. In the first decade of the twenty-first century, the Leadership Collaborative (LC) recognized the opportunity to expand Nag’s Heart retreats to women in STEM due to national attention being focused on the career dilemmas of this uniquely situated population. The LC also recognized an opportunity to advance the research agenda on women and mentoring.

The Situation of Women in Academic STEM Fields: Facts and Figures

It is well recognized that White women and racial minorities are underrepresented in STEM academic disciplines. Even though the numbers of STEM degrees earned by White women and racial minorities have slowly increased (Burke, 2007; McNeely & Vlaicu, 2010), disparities persist at all levels of academia. The problem is particularly prominent at the faculty level, with female and minority individuals consistently comprising only a small proportion of university STEM professors. Statistics from the National Science Foundation (2012) indicate that in recent years, women have held 32.3 percent of the associate and assistant professorships and 22 percent of the full professorships in the life sciences, and only 17.5 percent of assistant/associate professorships and 5 percent of full professorships in engineering. The percentage of full-time STEM faculty who are female lags behind both the educational pipeline and the percentage of women in STEM-related professions in industry (Hill, Corbett, & Rose, 2010). Whereas in 2000 over 44 percent of biological professionals were women, only 34 percent of faculty in life sciences were women (Di Fabio, Brandi, & Frehill, 2008; Hill et al., 2010). The comparable figures for women in math professions generally versus math university faculty are 30 percent and 19 percent, respectively. In engineering, the dearth of women has been
consistent in both industry and academic professions: roughly 11 percent (Di Fabio et al., 2008; Hill et al., 2010). Hill et al. (2010) also showed that in 1996, women earned 12 percent of doctoral degrees in engineering, but in 2006 (allowing ten years to begin an academic job and earn tenure) only 7 percent of tenured engineering faculty were women. The comparable figures for biology—now a female-dominated college major—were 42 percent of earned doctorates in 1996 but less than 25 percent of tenured faculty in 2006. Similar disparities and career barriers are found for women in STEM academic careers around the globe (see Barone, 2011; Mody & Brainard, 2005).

Women are also more likely than men to exit STEM careers (Hewlett et al., 2008; Xu, 2008). Over half of women in STEM-related professions leave their jobs by mid-career, compared to less than 20 percent of men. Xu (2008) analyzed data from a national probability study of faculty, focusing specifically on STEM disciplines and found that female STEM faculty expressed a stronger intention to seek another full-time position in academia than male STEM faculty.

Those who are from an under-represented racial or ethnic group (URM) are at an even greater disadvantage as STEM faculty members. Of non-social science STEM PhD recipients in 1996–1995, between 5.5 percent (Earth Sciences) and 8.2 percent (Computer Science) were URM (Nelson & Brammer, 2010). Yet representation of URMs among full professors at top 100 research universities across a host of non-social science STEM disciplines by 2007 ranged from 2.5 percent (physics) to 5.6 percent (chemical engineering) (Nelson & Brammer, 2010). Nelson and Brammer (2010) further reported that out of 14,400 tenured or tenure-track faculty employed in the nation’s top fifty STEM departments, 1,678 of these were women and only eighty-eight—about 0.5 percent—were women of color. Women of color in STEM face dual prejudices due to their race/ethnicity and gender (Ong, Wright, Espinosa, & Orfield, 2011). As a result, the number of female URM STEM faculty members is remarkably low.

**Women in STEM: Explaining the Facts and Figures**

Researchers have sought to understand why White and URM women are so much less likely to be employed as faculty members in STEM departments, especially research-focused departments. Valian (2005) has delineated the range of processes that serve to marginalize women in STEM, from the almost imperceptible but accumulative social-cognitive effects of categorization and stereotyping to the disparaging, hostile acts of sexual harassment and bullying. Implicit biases still wreak havoc on the career trajectories of women in STEM. As recently as 2012, researchers found that STEM faculty in top research-intensive universities demonstrated a preference for hiring a man over a woman for a laboratory assistant position (Moss-Racusin, Dovidio, Brescoll, Graham, & Handelsman, 2012).
Women keenly feel the negativity. In Rosser’s (2004) survey of nearly 400 STEM faculty members, social isolation was mentioned as one of the most significant barriers to career advancement. McNeely and Vlaicu (2010) also found that exclusion from social networks was a problem, indicating that social isolation and lack of connectivity has persisted for female STEM faculty. Women not only feel the negativity; they also sometimes internalize it: Holleran, Whitehead, Schmader, and Mehl (2011) found that female STEM faculty experienced stereotype threat (confirming that a group stereotype is true of oneself) when discussing research with men, which was linked to career disengagement.

Surveys of women who have departed or who intend to depart from academic STEM fields show the same patterns as the studies of women who, against the odds, remain. Xu’s (2008) study linked women’s departure from STEM fields to their dissatisfaction with advancement opportunities, with research support, and with the ability to freely express ideas. Other researchers (e.g., Trower, 2008, as cited in Hill et al., 2010) cited unsupportive workplaces, ambiguous rules for career advancement, lack of mentoring by senior colleagues, extreme work schedules, and the inability to balance work and family demands as major factors in women’s disproportionate exit from STEM fields.

Assessing the Effectiveness of Nag’s Heart Retreats

During the first decade of the existence of the Nag’s Heart retreats, periodic assessments occurred. Participants were asked about their experiences. The vast majority of participants found the experience to be wholly positive. Most sought to attend another retreat when possible. But during the first decade most of the participants were social scientists, or lawyers, or managers in large organizations. Only a few, including some physicians, were employed in the “hard” sciences.

The question arose: Would the sort of experience provided to participants by a Nag’s Heart retreat prove beneficial to women scientists who, by virtue of their training and their inclinations, might tend to feel suspicious of something so “touchy-feely” or who, by virtue of their work, might find it hard to spend too much time on group process? Without denying the obvious benefits of Nag’s Heart retreats for one type of woman, we had reason to doubt the efficacy of the method for women with different habits of thought. And yet, knowing that social and professional isolation figured so largely in the experiences of women in STEM fields, we thought that a Nag’s Heart retreat might prove especially important for women in STEM fields.

Aided by a seed grant from her then-institution, Southern Illinois University (SIU), one of the authors (MS) organized a study of the effectiveness of our mentoring intervention for women in STEM. The grant permitted some members of the LC to get together with administrators from SIU and permitted
the running of two sessions for early-career women (mostly post-doctoral scholars) in STEM. The grant also allowed the running of three NAG's Heart retreats for middle to senior women in academic STEM fields for which attendance fees were waived. Finally, assistants were paid to help with data collection and data analysis.

The three focal retreats took place in different locations at different times for varying durations and with different facilitators. In June 2012, nine women came together for two days in Cincinnati, Ohio. Four were Asian-American/Asian, and five were European-American/White. Ages ranged from thirty-five to fifty-eight years of age for the participants. The group included four assistant professors, three associate professors, and two full professors. A few weeks later, six African-American/Black, two European-American/White, and two Asian-American/Asian professors gathered in Boston for an evening followed by a full day. Their ages ranged from thirty-eight to sixty-three years of age, and the group included one assistant professor, one associate professor, and seven full professors. Finally, in June 2013, seven full professors, two associate professors, and one research administrator came to a three-day retreat in Santa Cruz, CA. Eight of the women self-identified as White and two as mixed-ethnicity. Their ages ranged from forty-two to sixty-five years of age.

Each participant in each workshop was sent a questionnaire one week after the retreat and a second one after three months. The surveys contained both close-ended and open-ended questions. Closed-ended items assessed participants' sense of empowerment, perceptions of social support, and intentions for career persistence. Open-ended questions asked participants about the impact of the experience, about anticipated positive outcomes, and about anticipated negative outcomes. Participants were also asked if there was any critically important event that occurred for them during the retreat.

Response rates were very high to the questionnaire sent one week after the retreat. One hundred percent of the women in Cincinnati and Santa Cruz responded, as did seven of the nine women in Boston. Response rates dropped for the three-month follow-up: six of the nine women from Cincinnati, five of the nine women from Boston, and nine of the ten women from the Santa Cruz retreats replied.

What We Found from the Surveys

To understand the data from the post-retreat questionnaires, we relied on methods of qualitative data analysis prescribed by Maxwell (2013) and Merriam (2009). Two researchers independently reviewed the data to identify potential themes for coding. The two researchers shared their independently generated themes and discussed each to develop a preliminary codebook. The researchers next independently coded the data and then met to discuss discrepancies and potential revisions to the codebook. Coding definitions were refined and two
additional codes were added to the codebook. In the final step of data analysis, the researchers coded the data once again using the revised codebook and met to discuss any discrepancies in coding. Once consensus was achieved, frequencies for each code were calculated.

Retreat Impact

Analyses of answers to an open-ended question about how and why the retreat impacted them suggested that attendees were largely affected by the advice they received from other retreat attendees. Respondents mentioned advice was provided in a variety of ways including how to handle various dilemmas, strategies to succeed in academia, new ideas or creative coping strategies, and available resources. Related to this was the other most frequently coded response to this question which dealt with increased feelings of confidence. This suggests that participants were impacted by the advice they received such that they felt greater empowerment, enhanced inner strength, and stronger confidence in their ability to deal with the professional and personal dilemmas they faced. Two other frequently coded categories include validation and clarity. Thus participants were strongly impacted by learning that other women struggle with similar dilemmas. Women reported feeling validated that they were not alone in facing certain types of struggles, nor were their perceptions of situations deemed inappropriate by others. This validation in turn facilitated greater clarity in how to articulate the dilemmas they were facing and in some cases, greater clarity in how to handle specific issues. One respondent shared how she felt validated as a result of attending the retreat.

Hearing about others' problems that are similar to mine was reassuring (if depressing) that my problems are not unique and therefore are unlikely to be due to my specific shortcomings. Meeting strong successful women and having the chance to build the start of friendships was extremely valuable. [The retreat] increased my confidence—if these women think I can go far, then maybe [... I can].

Positive and Negative Outcomes

The most frequent response to the question of positive outcomes from the retreat was confidence, followed by both mentorship and a positive outlook. Thus respondents indicated they left the retreat with greater confidence to tackle their dilemmas and a more positive perspective or attitude when approaching their challenges. A large number of women also reported that they anticipated the mentoring they received at the retreat to be a lasting positive outcome of the retreat experience. Other positive outcomes coded were a sense of renewal, greater awareness of the struggles facing women in academia, a sense
of community and friendship with other participants, strategies, and clarity as to how to approach their personal dilemma. As for negative outcomes, responses were sparse. Some felt it was difficult to return to their home institutions without powerful allies to support the concerns raised in the retreat.

**Critical Events**

Our analysis showed that participants were particularly impacted by the stories that were shared during the retreat and the candidness and genuineness of those sharing their stories. Respondents mentioned how strongly they were impacted by other women's stories of pain, isolation, and alienation. They also were struck by the fact that the women attending the retreat and sharing such stories were so honest, open, and trusting of one another. For example, one respondent stated that a critical event was:

> feeling comfortable sharing the challenges you are experiencing in your career and getting tangible feedback of how to move forward [...] As a trained scientist I was skeptical as to how effective this retreat would be. I was pleasantly surprised by both the openness and trust I experienced.

**Three Months Later**

Three months after the retreat, participants were asked to respond to the fourth question: To what extent did the retreat impact your life and career? Many respondents shared how when they think back to the retreat, they experience a sense of fondness for the retreat, its organizers, and attendees. Several respondents also reported wanting to reconnect with retreat participants and to have follow-up meetings. Finally, a large number reported lessons learned, meaning that they learned something meaningful as a result of their participation in the retreat.

One respondent seemed to summarize the feelings of many of the women who attended the Nag's Heart retreat:

> I was challenged with a very significant career decision at the time of the retreat, and the interactions there provided me with strong support and thoughtful advice that made my decisions easier and implications of the decisions more clear to me. Hearing about the problems and challenges of the other participants made me realize the universality of some of the issues I deal with in my career. Therefore, enhanced awareness and direct input into my challenges were immediate impacts that the retreat had for me. In addition, knowing that this community of women exists and that I can call on them for help, feedback, and support in the future is a huge advantage.
Implications and New Questions

Our findings suggest that mentoring experiences such as the Nag’s Heart retreat for women are meaningful and impactful because they provide participants with the opportunity to gain perspective and feel validated. Such experiences allow participants to remove the proverbial mask that seems to be all too common for women working in highly professional and competitive work environments. Providing women with the opportunity to hear one another’s heartfelt stories of pain and triumph makes it possible for them to mentor one another with special effectiveness. We were glad to find that the Nag’s Heart retreats prove effective for women in the hard sciences just as they have proven effective for women in other fields.

The Nag’s Heart model has varied in many ways and stayed constant in others. Retreats have been held for as little as one day and as long as two weeks (a hike through the Himalayas constituted one Nag’s Heart). Retreats have been held in homes, bed and breakfasts, hotel conference rooms and suites, and retreat centers. They have piggy-backed onto other conferences and have been stand-alone events. Retreats have also varied on the extent to which participants have previously known each other. The core principles of structured sessions, truthfulness, and trust, however, have been consistent with each retreat.

A model that has not yet been tested is to start a longer lasting mentoring circle with a Nag’s Heart retreat; but the idea of continuing the discussion over email or by recurring annual retreats is promising. A Nag’s Heart retreat would be a powerful way to establish trust and commitment among mentoring circle participants. Norms of listening, truthfulness, and status attenuation develop within the Nag’s Heart process that may be sustained throughout the life of the mentoring circle. The anticipation that Nag’s Heart participants will work with each other over time may alleviate some of the concerns we heard from past participants that they may not see each other again.

Some other big questions remain. Three seem especially important for the researchers and practitioners reading the present volume.

a. How might language facility influence group dynamics and mutual understanding? For example, it is likely that not all participants are adept in being able to accurately articulate their feelings and ideas. Does the Nag’s Heart structure create a barrier for them, or can this be overcome?

b. How well might the Nag’s Heart model work for those from completely different cultural backgrounds? Nag’s Heart retreats have had participants residing in the USA from many different cultural and international backgrounds, but to date, no Nag’s Heart retreat has been held exclusively with non-US participants. The internationalization of the Nag’s Heart model is a promising horizon, but intentional focus on how the model may or may not generalize in other cultures is needed.
What would happen to the dynamics if men were included? A few men have participated in Nag's Heart retreats in the past because they too need to replenish the feminist spirit. But a more intentional focus for men in Nag's Heart retreats, or Nag's Heart retreats for men is warranted in this era when a focus on building "allies" is promising (e.g., Fabiano, Perkins, Berkowitz, Linkenbach, & Stark, 2003).

It is our sincere hope that we might find answers to these questions. By continuing to take great care in whom we invite to join our circles and in how we prepare newcomers for the intensity of the experience, we expect to minimize the risks that might otherwise arise when one seeks to bring together people with different backgrounds. Surely, we will always acknowledge and salute those aspects of individual identity that emanate from demographic characteristics. And just as surely we will always probe for the ways that each individual carries in herself the basic human impulses to strive for fulfillment and to link with love and trust to other humans in whom she can recognize similar strivings.

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