Chapter 17
Religion, Spirituality, and Stress

Science without religion is lame; religion without science is blind.

Albert Einstein (1879–1955)

In Chap. 10, we reviewed the process of meditation as a treatment for human stress. The reader will recall that the history of meditation is grounded firmly in religion. We will now take a closer look at religion and spirituality, over and above their meditative components, as tools for the reduction or amelioration of stress and disease.

A relevant and actively debated cursory question on this topic involves whether or not religion is beneficial to one's health. Within the past 20 years, objective empirical data have explored the relationship between spiritual and religious involvement and physical and emotional health. Even with the accumulation of methodologically sound data, the debate over religion's role in health is far from resolved. The purpose of this chapter is to provide a brief review of some of the pertinent literature in this area, particularly relative to stress.

Before addressing some of the possible mechanisms of action and the research literature, it may be helpful to define and clarify the terms *spiritual* and *religious.* Not surprisingly, the terms are interrelated; however, Josephson and Peteet (2004) have differentiated them in the following way: "…*spirituality* refers to one's connection to realities larger than oneself or larger than the material universe. It is an umbrella concept under which the specific category of *religion* is subsumed. … Religions formalize what the spiritual individual experiences" (p. 16), and as Richards and Bergin (1997) note, "It is possible to be religious without being spiritual and spiritual without being religious" (p. 13).

Mechanisms of Action

Herbert Benson, the originator of "the relaxation response," has investigated and written extensively on how beliefs and expectancies, including religious beliefs, have a positive impact on one's physical and emotional health. He introduced the term *remem-*

G.S. Everly and J.M. Lating, *A Clinical Guide to the Treatment of the Human Stress Response*, DOI 10.1007/978-1-4614-5538-7_17,

bered wellness in an attempt to replace the term *placebo effect*, which he felt had a rather negative connotation. *Remembered wellness* is a term designed to capture the powerful healing and empowering force of individual beliefs in promoting and enhancing treatment and curative effects. Benson (1996) further described the combination of the physiological powers of the relaxation response and the construct of remembered wellness as the "faith factor." He provides an example of this combination by suggesting that the influence of religious rituals practiced in childhood may actually have the potential to regenerate neural pathways that are related to faith and well-being in later adulthood. Chang, Casey, Dusek, & Benson (2010) have more recently reported that an increase in the relaxation response was associated with enhanced spiritual well-being and improved measures of psychological outcomes like depression, anxiety, hostility, and the global severity index in cardiac rehabilitation patients.

Benson (1996) further suggests that belief in God, in whatever transcendent form an individual chooses to manifest it, may serve as an influential source of strength and healing. For example, Van der Merwe, Van Eeden and Van Deventer (2010) suggest that a belief in God in Christians of African descent provides a contribution to their sense of meaning and psychological well-being. Benson further acknowledges that worship services may possess certain therapeutic effects, including the chance to listen to soothing music in a pleasant environment, to be distracted from daily psychosocial stressors and socialize with others, to perform comfortable and familiar rituals, and to reflect, pray, and learn. Scheiman, Bierman, & Ellison (2010) found that praying was indirectly associated with an increased "sense of mattering" among older adults (age 65 years and older) through divine control beliefs, which combine personal empowerment with divine involvement. To elaborate, Koenig (1997) notes that religious beliefs can provide a sense of control over one's destiny when a person puts his or her complete trust in a personal God and asks for forgiveness. Moreover, he suggests how this relief may occur:

> There is no sin or mistake in life that cannot be confessed and forgiven. Thus, no matter what a person has done in the past, he or she can start fresh again by recommitting one's life to God. Guilt, which religion itself can provoke, is erased by the simple act of asking for forgiveness. Not surprisingly, such beliefs may have powerful psychological consequences, and may indeed bring comfort to those who are lonely anxious, discouraged, or feeling out of control. (p. 68)

From 1997 to 2004, the number of studies related to forgiveness quadrupled (Worthington & Scherer 2004), and the topic continues to garner considerable research attention. Worthington (2005) has broadly defined forgiveness as a process of mitigating inter-related negative resentment-based emotions, motivations, and cognition, and separates it into two types: a decision to control one's behaviors (i.e., decisional forgiveness) and one that involves changes in cognitions, emotions and motivations (i.e., emotional forgiveness). Forgiveness is broadly conceived, therefore, as a reduction in unforgiveness, along with promotion of more positive emotion and understanding (Baetz & Toews, 2009). Unforgiveness has been associated with increased stress response reactions such as higher EMG change scores, higher change scores in skin conductance levels (SCLs), greater heart rate increases and significantly increased mean arterial pressure (Witvliet, Ludwig, & Vander Laan, 2001). The authors concluded that chronic unforgiving "may contribute to adverse health outcomes by per-

petuating anger and heightening SNS arousal and cardiovascular reactivity" (Witvliet et al., p. 122). Conversely, studies have demonstrated the positive effects of forgiveness on chronic pain (Carson, et al., 2005; Rippentrop, Altmaier, Chen, Found, & Keffala, 2005), hypertension (Buck, Williams, Musick, & Sternthal, 2009; Tibbits, Ellis, Piramelli, Luskin, & Lukman, 2006), substance abuse (Lin, 2010; Webb, Robinson, & Brower, 2011), and PTSD (Solomon, Dekel, & Zerach, 2009; Witvliet, Phipps, Feldman, & Beckham, 2004). Jankowski and Sandage (2011) have more recently advanced a theoretical model in which meditative prayer increases hope which leads to feelings of attachment and security which leads to enhanced forgiveness. Implementing a randomized controlled 6-week group-based forgiveness training program that incorporated psychoeducation, cognitive restructuring, visualization, and heart-focused meditation, Harris and colleagues (2006) reported that the program was two to three times more effective in reducing negative thoughts, anger and stress, and produced significant increases in positive thoughts, forgiveness self-efficacy, and forgiveness in novel situations than a control condition.

Research

It is notable that both lay and professional interest in complementary and alternative medicine (CAM) treatments for illness has increased tremendously in the past decade. Even more relevant are the data in the USA that prayer for self (43%) and prayer for others (24.4%) are the two most noted alternative medicine procedures (Barnes, Powell-Griner, McFann, & Nahin, 2002). In a national survey of 726 critical care nurses, Tracy et al. (2005) determined that 73% used prayer in their practices, 81% had recommended its use to patients, and 79% had been requested by patients or families to pray on their behalf. It is also worth noting that around 67% of accredited medical schools offer courses on spirituality in medicine (Fortin & Barnett, 2004). Despite the common practice of prayer, there are many challenges associated with empirically studying aspects of spirituality, including the perception that it is too "subjective" and "invisible" or that there are residual professorate biases against graduate students studying domains that are not naturalistic or secular (Richards & Bergin, 2005). In fact, a review by Galek, Flannelly, & Porter (2008) of the studies included in the *Handbook of Religion and Health* (Koenig et al., 2001) revealed that only about 10% of studies on mental health studies and 5% of studies on physical health measured religious beliefs. These perceived biases and limited measures of religious beliefs appear to be ameliorating, and there appears to be a growing empirical literature on spirituality and religion.

Emotional Health

Available data are generally supportive of the benefits of religious beliefs relative to many outcome measures of emotional and social adjustment. In a meta-analysis of 49 studies assessing the relationship between religious coping and psychologi-

cal adjustment to stress, Ano and Vasconcelles (2005) concluded that "individuals who used religious coping strategies such as benevolent religious reappraisals, collaborative religious coping, seeking spiritual support, etc. typically experienced more stress-related growth, spiritual growth, positive effect, and had higher self-esteem, etc." (p. 473). Conversely, they found that negative religious coping strategies (e.g., spiritual discontent, reappraisal of God's powers as punishing) were associated with poorer psychological adjustment, and increased depression, anxiety, and distress). Magyar-Russell and colleagues (2007) examined the impact of religious beliefs and spirituality in a sample of 87 burn survivors, and reported that positive religious coping was related to better physical functioning, whereas negative religious coping was related to poor sleep, body image dissatisfaction and symptoms of PTSD after discharge. In a more recent study of 103 women who were part of a perinatal loss project and who were assessed for severity of grief for at least one year following their loss, religious struggle and negative religious coping were associated with more severe grief (Cowchock, Lasker, Toedter, Skumanich, & Koenig, 2010).

Donahue (1985) noted that people who use religion as an end in itself (i.e., the intrinsically religious) seem to do better emotionally than those who use religion as a means to achieving some other end (i.e., the extrinsically religious). More recently, Ardelt and Koenig (2006, 2007) noted that older individuals near death have a better subjective sense of well-being if they have an intrinsic religious orientation compared to one that is extrinsic. Intrinsic religiosity has been associated with higher distress shortly after a traumatic event, but lower severity of PTSD symptoms over time, and increased posttraumatic growth eight months or more after the trauma (Schaefer, Blazer, & Koenig, 2008). Other studies have shown that frequency of prayer (Byrd, Hageman, & Isle, 2007) and the social support that occurs from membership in a religious organization (Byrd, Lear, & Schwenka, 2000) are associated with psychological well-being. Adherence and belief in religious traditions have been linked with greater self-esteem and less stress (Yakushko, 2005), greater emotional support (Krause & Wulff, 2005), and less depressive symptoms (Eliassen, Taylor, & Lloyd, 2005; Keyes & Reitzes, 2007).

Religious factors have been associated with reduced alcohol, cigarette, and drug use, as well as improved quality-of-life measures for patients suffering from cancer (Larson & Larson, 2003; Matthews, Larson, & Barry, 1993; Menagi, Harrell, & June, 2008; Nagel & Sgoutas-Emch, 2007; Sekulic, Kostic, Rodek, Damjanovic, & Ostojic, 2009; VonDras, Schmitt, & Marx, 2007). Religious messages and religious-based social mechanisms also have been associated with decreased obesity in Korean women living in the USA (Ayers et al., 2010). Moreover, religious involvement has been associated with more frequent exercise, better sleep quality, better diet, and even more regular seat belt usage (Hill, Burdette, Ellison, & Musick, 2006; Hill, Ellison, Burdette, & Musick, 2007).

Koenig and his colleagues have done much of the seminal work examining the general health benefits of religion. For example, in a sample of 298 patients admitted consecutively to the general medical services at Duke University Medical Center, 40% ranked religion as the most important factor that enabled them to cope

with the stress of their illness (Koenig, 1997). Moreover, Koenig and associates (1995) reported that higher religious beliefs as assessed by the Religious Coping Index (RCI) were associated with lower cognitive symptoms (anhedonia, boredom, social withdrawal, and feeling sad, blue, or hopeless), but not necessarily fewer somatic symptoms (weight loss, sleep disturbance, fatigue, loss of energy, psychomotor retardation) of depression in a sample of 832 men, with an average age of 70 years, admitted to a VA hospital. Frazier, Mintz, and Mobley (2005) found in a sample of 86 elderly (mean age 68.7 years), urban, African Americans (50 women and 36 men) living in different parts of New York City that more religious involvement, whether organizational, nonorganizational or subjective, was associated with psychological well-being. More recently, Krause, Shaw, and Liang (2011) found that older African American adults, but not older whites, who identify with their congregation adopt healthier lifestyles when encouraged by their fellow church members.

A recent cross-sectional retrospective study of 608 bereaved participants (reported the loss of a family member, colleague, or friend associated with attacks on World Trade Center, Pentagon, or aboard the airplanes) 2.5 to 3.5 years after the attacks of September 11, 2001 (Seirmarco et al., (2012) assessed the impact of changes in religious beliefs and their association with complicated grief (see Chap. 20), PTSD (see Chap. 21), and major depressive disorder. Results revealed that 78% of participants reported no change in importance of religion after 9/11, 11% reported that religion became more important, and 10% reported that their religion was less important. Religious beliefs became less important for participants who lost a child as compared to other personal loss, and also for those who watched the attacks live on television. Compared to those who reported no change in religious beliefs, participants who reported decreased religious importance were close to three times more likely to screen positive for Complicated Grief, 2.5 times more likely to screen for major depressive disorder and almost two times more likely to report probable PTSD.

Additional treatment outcome data regarding religion have been gathered when accepted psychotherapeutic interventions have been modified to include a spiritual component. Efficacy studies have also compared spiritually focused cognitive-behavioral therapy (CBT) with standard CBT. In one of the earlier well-controlled of these investigations, Propst, Ostrom, Watkins, Dean, and Mashburn (1992) reported that Christian participants who received CBT with religious content had significantly less depression at the end of treatment compared to participants in the regular CBT group or a wait-list control group. More recent models of integrating spirituality and CBT have shown effectiveness with older adults (Snodgrass, 2009), and Walker and colleagues (2010) have devised a model that integrates religion with trauma-focused cognitive behavior therapy as relating to children and adolescent victims of sexual and physical abuse. The flourishing of mindfulness-based treatment strategies (see Chap. 8), referred to as the third-wave of CBT traditions, is relevant to this topic since they emerged and are grounded in spiritual and religious foundations (Hathaway & Tan, 2009; Hayes, 2002).

Physical Health

Interest on the relation between spirituality, religion, and physical health has become increasingly prevalent in the past two decades, as both professional journals and the popular press have offered substantial coverage. Several of these studies have assessed the effect of religious or spiritual involvement on cardiac and heart surgery patients. Saudia, Kinney, Brown, and Young-Ward (1991) reported that 96 of 100 coronary artery bypass grafting (CABG) patients reported using prayer as a means to cope with the stress of impending surgery, and 70 of the participants gave prayer the highest rating of effectiveness. Oxman, Freeman, and Manheimer (1995), who investigated mortality rates after elective, open-heart surgery for coronary artery disease or aortic valvular stenosis in 232 patients over the age of 55 years, reported that "patients receiving no strength and comfort from religion were over three times more likely to die after heart surgery" (p. 10). These results occurred even after controlling for history of previous surgery, functional impairment prior to surgery, and age. In a convenience sample of 142 patients, Contrada and colleagues (2004) reported that stronger religious beliefs were associated with fewer surgical complications and shorter hospital stays, with the effect on complications mediating the effect on length of stay. However, they also found that more frequent attendance to religious services was related to longer hospital stays, not shorter ones, and that frequency of prayer had no effect on recovery. In a more recent study of 92,395 postmenopausal women involved in the Women's Health Initiative (WHI) who were followed for an average of 7.7 years, Schnall and colleagues (2010) reported that, after controlling for demographic, socioeconomic, and prior health factors, religious-related variables (i.e., self-report of religious affiliation, frequent religious service attendance, and religious strength and comfort) were not associated with reduced risk of CHD morbidity and mortality. However, they reported that these religion-related variables were associated with a reduction of all-cause mortality.

A large-scale epidemiological study and a levels-of-evidence methodological approach have shown that church service attendance is related to lower mortality rates (Koenig et al., 1999; Powell, Shahabi, & Thoresen, 2003), although a more recent longitudinal study assessing church attendance and health over the lifespan (Koenig & Vaillant, 2009) found little direct association between mortality and church attendance. When other variables, such as past health, smoking, alcohol abuse/dependence and mood were included in the regression model, the direct effect of church attendance on objective and physical health was not significant. There was, however, direct support for an association between church attendance and reported well-being. Other studies have demonstrated the beneficial effects of religious and spiritual beliefs and interventions (e.g., prayer) on oncology patients (Kaplar, Wachholtz, & O'Brien, 2004), postsurgical patients (Contrada et al., 2004), chronic pain patients (Wacholtz & Pearce, 2007), spinal cord injury patients (Brillhart, 2005), and stroke, traumatic brain injury, and other rehabilitation patients (Giaquinto, Spiridigliozzi, & Caracciolo, 2007; Kalpakjian, Lam, Toussaint, & Hansen Merbitz, 2004; Pargament, Magyar-Russell, & Murray-Swank, 2005). In a nationally representative sample of 2,262 men and women with a history of cancer, 68.5% used

prayer for health and 88% had prayed during the past year (Ross, Hall, Fairley, Taylor, & Howard, 2008). Moreover, the authors found that being older, female, married, non-Hispanic black, and living outside the West were relevant indicators of praying for one's health. There are studies suggesting that higher levels of religious involvement are associated with lower blood pressure and decreased chances of hypertension (Koenig, McCullough, & Larson, 2001; Seeman, Dubin, & Seeman, 2003); however, Fitchett and Powell (2009) did not find that higher scores on the Daily Spiritual Experiences Scale (DSES) affected the systolic blood pressure or hypertension in a sample of 1,060 Caucasian and 598 African-American midlife women participating in Study of Women's Health Across the Nation (SWAN).

Dean Ornish (1990) received considerable attention for well-designed research demonstrating that the progression of coronary atherosclerosis could be stopped or reversed in patients without the use of lipid-lowering drugs. Instead of medications, patients in the experimental group were prescribed an intensive lifestyle component that included diet, exercise, smoking cessation, and stress management. Also included in this program, and a factor that Ornish considered essential for success, was a spiritual component designed to help patients seek communion with God or a Higher Power. Ornish and his colleagues (1998) reported on the continued improvement and success of the patients with heart disease who incorporated and adhered to these lifestyle changes for 5 years. Ornish and his colleagues (2005) have reported similar success in implementing lifestyle changes to positively affect the progression of prostate cancer. Schnall and colleagues (2010) found that stronger religious beliefs and practices were related to lower all-cause mortality rates, but not related to risk of coronary heart disease.

When the last edition of this text was published there was accumulating lay interest and growing discourse on the intriguing, yet controversial empirical studies demonstrating the beneficial effects of intercessory prayer (IP; praying for the benefits of others, also known as "distant prayer"). In one of these studies, Byrd (1988) investigated the effects of intercessory prayer on 393 patients admitted to the coronary care unit at San Francisco General Hospital over a 10-month period. In this double-blind study, patients were randomly assigned to either the intercessory prayer group or a nonprayer group, and three to seven active, "devotional" Christians were randomly assigned to pray for the 192 patients in the intercessory prayer group.

The results of the study revealed that members of the prayer group did significantly better than the nonprayer group on a number of health-related measures (e.g., congestive heart failure, diuretic use, cardiopulmonary arrest, pneumonia, antibiotic use, and need for intubation/ventilation) during the course of their hospitalizations. Byrd acknowledged that he did not attempt to limit the amount of prayer that the control group received from outside persons not associated with the study, or the amount of individual prayer or religiosity held by the participants.

Harris and colleagues (1999) replicated Byrd's (1988) work in a sample of 990 patients admitted to the coronary care unit (CCU). Using a randomized, controlled, double-blind procedure, in which the 466 patients in the IP group were prayed for daily for four weeks, compared to usual care for 524 patients, the IP group had lower CCU scores (a weighted and summed scoring system that resulted in a continuous variable from 1 to 10 that described patient outcomes from excellent to cata-

strophic). More specifically, there was an 11% reduction in scores in the prayer group compared with the usual care group.

Sicher, Targ, Moore, and Smith (1998) used intercessory prayer in a randomized trial of 40 patients diagnosed with advanced AIDS and matched by age, CD4+ count, and number of AIDS-defining diseases (ADDs). At the 6-month study endpoint, the prayer group experienced significantly fewer outpatient visits, hospitalizations (and days in the hospital), and ADDs, and higher ratings of improved mood compared to the nonprayer group. Sicher and associates (1998) offer several possible secular explanations for their results but also recognize that these provocative data cannot be completely dismissed without considering other possible benefits of intercessory prayer.

Shealy, Smith, Liss, and Borgmeyer (2000) reported on the alteration of EEG brain maps (see Chap. 14) on 110 volunteers who received distant or absent "healing." In all instances, notable changes in EEG activity occurred within the first 5 min of receiving healing energy at distances ranging from 100 feet to 160 miles. Sometimes, however, the EEG alterations appeared most dramatically 20 min post-intervention.

Since the publication of the last edition of this text, there has been considerable empirical interest in systematically assessing the efficacy of intercessory prayer. In a meta-analytic review of 14 studies using a random effects model, Masters, Spielmans, & Goodson (2006) concluded that "the most parsimonious statement to be made from this literature is that there is no scientifically discernable effect that differentiates that status of individuals who are recipients of IP from those who are not" (p. 24). Howard and colleagues (2009), using techniques of meta-analysis and Bayesian analysis of IP studies on cardiac care patients, concluded that "our data suggest that remote intercessory prayer is not a real phenomenon. Further, the research literature is likely due to an excessive number of Type I errors mixed with a few non-significant results" (p.162).

These rather discouraging conclusions of the empirical data should not, however, keep people from practicing intercessory prayer. In a 2005 review of the theological and theoretical foundations of IP published prior to his meta-analytic study noted above, Masters aptly notes that "the results of scientific experimentation are never normative of behavior, they are only statements of observations given certain conditions. Christians should continue, as they always have, to offer up prayers on the basis of their belief and understanding that a sovereign God hears and answers according to God's will" (p. 275).

Incorporating Spiritual and Religious Beliefs into Practice and Therapy

Interest in the relation between counseling and religion has grown and prospered substantially over the past decade. For example, as of 2011, the American Association of Christian Counselors (AACC) had more than 50,000 active members (http://www.aacc.net); it had 2,000 members in 1993 (Worthington, Kurusu, McCullough, & Sandage, 2007).

The use of spiritual themes and religion in intervention and counseling is not new. For example, 12-step programs or fellowships, most notably, Alcoholics Anonymous (AA), which has an estimated membership of about two million worldwide with 115,773 groups registered as of January 2010, have as their base the relevance of spiritual processes in clinical outcomes. The emphasis of the AA model is that success requires surrendering to a Higher Power, along with an acknowledgment of the need for God's assistance. Given the success of the AA model, other spiritually based, 12-step programs have been developed (e.g., Gamblers Anonymous and Narcotics Anonymous). Galanter (2007) offers a model based on empirical psychological research to help define the diagnosis of addiction, and criteria, such as social networks, attributing meaning to experiences and positive psychology as mechanisms involved in the spiritual 12-step programs.

Within the psychotherapeutic setting, individuals often present with concerns related to life perspectives, deep personal and relationship values, and well-being (Martinez, Smith, & Barlow, 2007). It is worth noting that religious issues frequently relate to these concerns and therefore, should be addressed (Smith & Richards, 2005), In fact, psychologists have an ethical obligation to provide services that address client context, including religious contexts (American Psychological Association [APA], 2002), and should be sensitive to the dilemmas that may arise, including informed consent (Hawkins & Bullock, 1995), dual relationships (Sonne, 1994), boundaries (Richards & Bergin, 2005), and therapist competence (Barnett & Fiorentino, 2000). Interventions, such as praying (including with clients in certain settings and certain conditions; Richards & Bergin, 2005), discussion of religious writings or sacred texts, spiritual meditation, and forgiveness have, however, been shown to enhance therapeutic effectiveness for some disorders, including those stress and anxiety-related (Smith, Bartz, & Richards, 2007).

Richards and Bergin (2005) have suggested a number of religious and spiritual factors that they consider relevant for success within an integrative, multidimensional, psychotherapeutic approach. For clients willing to pursue this strategy, they define the following approaches that therapists may employ:

1. Helping clients experience and affirm their spiritual identity and divine worth.
2. Assisting clients in seeking guidance and strength from God to assist them in coping, healing, and growing.
3. Obtaining support (i.e., social, emotional, and material) from religious community.
4. Modifying religious and spiritual beliefs and practices that are dysfunctional.
5. Using a more spiritual perspective to understand problems.
6. Working through religious and spiritual doubts.
7. Being able to forgive and heal.
8. Accepting responsibility for their harmful and selfish behaviors.
9. Helping to grow in faith, commitment and religious and spiritual beliefs.

Ellis (2000) has suggested his own set of spiritual goals that he believes therapists should consider, including:

1. Acquiring an outstanding meaning or purpose in life.
2. Unconditional self-acceptance combined with unconditional other acceptance.

3. Having unusual social interest and compassion for other people.
4. Being one's authentic self, even if others do no like it.

Summary

This chapter has provided a general overview of the relation between stress and spirituality. Let us review the main points of this chapter:

1. We began with a differentiation of the terms *religious*, which is considered to be external, denomination, and public, and *spiritual* which is thought to be ecumenical, internal, and private.
2. Various mechanisms of action regarding the potential psychological benefits of religion were then proposed. Herbert Benson's more recent work on the "faith factor" and therapeutic benefits of worship services was covered, as well as other psychological benefits, such as increased sense of meaning and control, self-esteem, and forgiveness.
3. Potential physical benefits of religion include perceiving the body as a "temple of the Holy Spirit" (Koenig, 1997), increased medical adherence and coping, fewer post-surgical complications, and reduced mortality rates.
4. Research has shown a positive relation between forgiveness and emotional and physical health.
5. Spiritual themes have been used in interventions such as Alcoholics Anonymous, Gamblers Anonymous, and Narcotics Anonymous.
6. Finally, Richards and Bergin (2005) suggest a number of religious and spiritual factors that may be incorporated during psychotherapy.

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