

Perceptual Control Theory's Congruence with Religion

By Richard H. Pfau, PhD

Paper prepared for presentation at the 31st Annual Conference of the
International Association for Perceptual Control Theory
7-9 October 2021

Abstract

The world's religions have many similarities in their teachings and benefits to humanity. Similarities include an emphasis on core values such as the golden rule (do unto others...), loving-kindness, and honesty as well as accountability for one's actions. Benefits include provision of a moral compass for behavior, improved physical and mental health for many, and a sense of community and harmony among people that provide a basis for society to exist. This paper shows how perceptual control theory can be used to explain (a) why many of those values and related teachings are so wise given how our nervous systems function, (b) the neural basis for religious concepts and practices such as sin, prayer, and other rituals, (c) why and how a number of benefits occur from religious practice, and (d) how our nervous systems function to produce both religious as well as non-religious behavior.

The World's Religions

Religions are important to many people and seem to have been since the dawn of civilization. Religions inform people's core values, codify their morals, and influence what they do. They provide guidelines as to how a person should act, what makes for a good life, and how to interact with others.¹ As Durkheim proposed, religions seem to have three major functions in society: they provide social cohesion to help maintain group solidarity through shared beliefs and rituals, social control of religious-based morals, and offer meaning and purpose to life.²

In addition, the world's major religions have many similarities in their teachings as well as benefits to humanity. Similarities include core values such as the golden rule (do unto others...), loving-kindness, honesty, charity, compassion and respect for others, and accountability for one's actions. Benefits include a sense of community and belonging, provision of a moral compass for behavior, improved physical and mental health for many, and provision of a basis

¹ Sukhsimranjit Singh, "Best Practices for Mediating Religious Conflicts," *Dispute Resolution Magazine* (Fall 2018), 12 & 13; Hossein Habibitabar, "Personal and Social Functions of Religion," *Journal of Basic and Scientific Research*, vol. 2, no. 9 (2012), 9517-9522.

² Downloaded 9 June 2021 from <https://courses.lumenlearning.com/boundless-sociology/chapter/the-functional-perspective-on-religion/>.

for the existence of society. Regarding the last point, it seems that civilization might not have developed as it exists today without the influence of religion over the years and the harmony among people that religion has provided.³

Perceptual Control Theory

As indicated in this paper's title, Perceptual Control Theory (PCT) is considered to be highly congruent with religion. So what is this theory? PCT is a theory of human behavior that explains why and how we do the things we do. In brief, it explains that behavior is the process by which we control perceptions that matter to us. And it does this by providing a model of how our nervous systems operate to control those perceptions, some of which are so important that we would die if we didn't control them!

The perceptions controlled are nerve signals from your senses, such as those of touch, taste, vision, hearing, balance, thirst, hunger, blood oxygen level and other senses totaling 20 or more.⁴ These senses are nerve cells that are stimulated by the environment around them, this being the rest of your body (its muscles, organs, and such) and by the environment outside of your body. And so you perceive (a) what you are doing and what is happening inside your body, as well as (b) what is outside of your body and happening there.

These perceptual signals are compared with "references" that we have. These references are nervous system signals and conditions such as what we call goals, objectives, purposes, standards, values, and biological set points important for survival such as the oxygen level of your blood. When there is a difference between what you perceive and a reference signal, error signals are produced. These signals, if important enough, lead to nerve signals going to your muscles and glands that produce actions and resulting perceptions that hopefully reduce, eliminate, or avoid error signals that are occurring or anticipated. For example, if you are hungry you may eat, or if your child has a fever, you may give him or her some medicine to reduce the fever, or if you have sinned, you may pray for forgiveness.

William T. Powers, the chief developer of PCT, has produced a hierarchical model of these neural signals that ranges from the perception of signal intensity on up to perceptions of events (such as opening a door or stealing something), to programs (such as how to boil an egg or perform a religious ritual), to principles (such as honesty, kindness, fairness, and justice), to systems concepts (such as of Christianity, society, and culture). In addition to behavior, PCT

³ Freud, for one, pointed out how religion subdued antisocial, selfish tendencies of people and fostered the development of civilization according to Raymond F. Paloutzian, *Invitation to the Psychology of Religion*, 3rd ed. (New York: Guilford Press, 2017), 84. PCT explains why those selfish tendencies exist – that is, "selfish tendencies" are a result of the way our neural systems and bodies function to produce perception that matter to us.

⁴ Such perceptual sensors could include "extrasensory sensors," that produce nerve signals, such as those resulting in divine experiences and communications with divine entities such as God. However, as far as I know, the existence of extrasensory sensors has yet to be determined according to strict scientific procedures.

also explains how conditions such as anxiety, other emotions, internal conflict, and external conflict between people occur.⁵

A PCT Analysis of Religious Wisdom

As mentioned before, major world religions have many similarities in their teaching and benefits to humanity. For example, one of these is what is popularly called “the golden rule.” This rule expresses a commitment to treat others with consideration, taking into account their interests, needs, and desires.⁶ As Table 1 indicates, the golden rule or variations of it, are found in religions and philosophies around the world.

Table 1: The Golden Rule of World Religions

- From Christianity’s Bible: “Therefore all things whatsoever ye would that men should do to you, do ye even so to them: for this is the law and the prophets”
- From Judaism’s Talmud: “What is hateful to you, do not to your fellowmen. That is the entire Law; all the rest is commentary.”
- From Islam’s Sunnah: “No one of you is a believer until he desires for his brother that which he desires for himself.”
- From Brahmanism’s Mahabharata: “This is the sum of duty: Do naught unto others which would cause you pain if done to you.”
- From Buddhism’s Udana-Varga: “Hurt not others in ways that you yourself would find hurtful.”
- From Confucianism’s Analects: “Surely it is the maxim of loving-kindness: Do not unto others that you would not have them do unto you.”
- From Taoism’s T’ai Shang Kan Ying P’ien: Regard your neighbor’s gain as your own gain, and your neighbor’s loss as your own loss.”
- From Zoroastrianism’s Dadistan-i-dinik: “That nature alone is good which refrains from doing unto another whatsoever is not good for itself.”

⁵ For more information about PCT, my book *Your Behavior: Understanding and Changing the Things You Do* (St. Paul, MN: Paragon House, 2017) will give you a good introduction. A more technical overview can be obtained by reading *Behavior: The Control of Perception*, 2nd ed. (New Canaan, CT: Benchmark Publications, 2005) written by William T. Powers, the major developer of PCT.

⁶ Jeffrey Wattles, *The Golden Rule* (New York: Oxford University Press, 1996), 126; Jeffrey Wattles, “Philosophical Reflections on the Golden Rule,” in *The Golden Rule: Analytic Perspectives*, eds. Jacob Neusner and Bruce Chilton (Lanham: University Press of America, 2009), 105.

Source: Fred Nickols, <i>Bucking the System</i> , Distance Consulting, 27 May 2019, p. 2, downloaded from https://www.nickols.us/BuckingtheSystem.pdf .

Looking at the golden rule with PCT in mind can help one understand why that rule is so wise. In short, it helps avoid neural conflict within individuals, as well as resulting resentment and conflict between individuals and groups of people. Let me explain.

According to PCT, conflict occurs when two references and related control systems are not compatible with one another. In other words, they are in a condition in which correcting the error in one system increases the error of the other system.⁷ For example, you may want to do two incompatible things, such as (1) marry a person that your parents have forbidden you to marry, and (2) maintain good relations with your parents. Or, you want someone to do something that is in opposition to an important reference that a friend has, such as to go together to a movie during a time that the person needs to do something else that is important such as study for a test. In either case, if you are pushy or forceful in doing what you want to do, you are sure to produce conflict and resentment.

As William Powers, the main developer of PCT, has written:

“Arbitrary control of the behavior of one person to suit the goals of another person ignores the goals that are already governing the behavior of the other person, and inevitably creates conflict.”⁸

“Control of [other people’s] behavior....is simply inconsistent with the facts of human nature.” “People cannot get inside each other’s brains to operate the control systems there, and those control systems are what cause behavior.”⁹

This idea, that you can’t really control the behavior of others without using force or related means such as coercion that results in conflict due to the ways our nervous system operates seems fully compatible with the golden rule which “enjoins us to take into account others’ interests, needs, tastes, wishes, desires.”¹⁰ And so, PCT thinking seems to be in keeping with the golden rule and related religious, ethical, and other moral views concerning human relationships – that is, how to interact with other people without producing conflict. In other words, “we can apparently say that PCT provides (a) a neurological explanation for religious, ethical, and moral

⁷ W. T. Powers, R. K. Clark, and R. L. McFarland, “A General Feedback Theory of Human Behavior: Part II,” *Perceptual and Motor Skills*, vol. 11 (1960), 319-321.

⁸ Powers, *Behavior*, 272.

⁹ Powers, *Behavior*, 283.

¹⁰ Wattles, *Golden Rule*, 126.

thinking as to why others should be treated with respect and love” as well as (b) a biological understanding of the wisdom behind the golden rule.¹¹

And so, the golden rule is a religious guide for considering and relating to others, and PCT can be used to “scientifically” explain why the rule is such a good guide to life – i.e., to avoid conflict between people.

The same holds for many other religious guidelines and references such as the Commandments of Christianity (ex, thou shall not steal); Islam’s Quranic verses displaying kindness and friendliness to others; Jewish laws such as prohibitions against slandering others, harboring grudges, and taking revenge; Hindu texts such as the Bhagavad-Gita, listing the qualities of virtuous and self-realized persons, such as being compassionate; and Buddhist “Truths” concerning right thought, right speech, right action, and right livelihood.¹²

These are just a few examples of the congruence between religion and PCT. Let’s look at some others.

Virtuous and Evil Behavior

The world’s religions provide guidance for how people should behave. Much of this guidance is similar across religions. Besides the golden rule, similarities include the avoidance of killing, stealing, telling lies, sexual misconduct, as well as being honest, kind, compassionate, and helpful towards others. Guidance and rules also differ from one religion to another. For example, Muslims have a duty to fast from food, drink, smoking and sex one month each year from sunrise to sunset, and Orthodox Jews have a rule that work is prohibited on Saturday, the holy day of the week. In either case, religions guide people towards carrying out actions that are considered to be good or virtuous and avoiding actions that are considered to be inappropriate, bad, or evil.

So, what is “good, virtuous behavior” and what is “inappropriate, bad, evil behavior” according to each religion? As was done for the golden rule, PCT can be used to provide an explanation based on its model of how our nervous system operates. According to PCT, “good” and “virtuous” behavior either produces perceptions that match a person’s references or that reduce,

¹¹ Richard Pfau, “Can We Control the Behavior of Others or Only Influence It? PCT, Interpersonal, and Other Perspectives” (paper presented at the International Association for Perceptual Control Theory’s Conference, Northwestern University, Evanston Illinois, 12-13 October 2018), 11 & 13.

¹² Timothy A. Sisemore and Joshua J. Knabb, *The Psychology of World Religions and Spiritualities: An Indigenous Perspective* (West Conshohocken, PA: Templeton Press, 2020), 61, 119-20, 183; Dalai Lama, *Towards a True Kinship of Faiths: How the World’s Religions Can Come Together* (New York: Doubleday Religion, 2010), 110-13; Sach, pp. 38, 45-48)

eliminate, or avoid error signals related to those references.¹³ What seems “right” seems good because there is no sense of error.¹⁴ That is, activities seem good when they reduce or avoid the production of error signals. Similarly, “inappropriate,” “bad,” and “evil” behaviors are those that produce error signals or prevent error signals from being reduced or eliminated, especially when references being violated may bring harm to oneself or to others.

Judgements that a person is especially “virtuous” are simply the result of important references being regularly met as perceived by what the person does. Judgements of behavior that is especially “evil” occurs when important references are perceived as not being met and the responsible person’s or group’s actions may harm other people. As one PCTer has written, “I think PCT would say that ‘evil’ is a perception and that the behaviors we see as ‘evil’ are just people controlling for things that the observer sees as bad things to control for.” “Evil exists as a perception, not something ‘out there’ in the real world.” “You perceive them [i.e., people such as Nazis and Islamo-fascists] as evil...and judge their behavior to be evil because they don’t match your references for the way people should behave.”¹⁵

For example, a person may have a reference that one should not steal. And so, he or she does not steal things, since doing so is bad and should not occur. Similarly, another person perceiving that the person does not steal, considers the person observed and his or her behavior to be “good” as far as stealing goes. However, if the observer perceives the person stealing things or find out he or she has stolen, the observer will consider the stealer to be bad, at least as far as stealing goes. That is, it will be considered “bad” unless the stealing is justified by another even more important reference that the observer has, such as, perhaps, it’s good to save the life of a starving child by stealing food if there is no other way to save the child’s life.

But, why is stealing considered to be bad by all major religions? PCT again can provide an answer on a biological level. It is bad to steal since doing so when perceived by those stolen from, may lead to resentment, conflict, retaliation, and a lack of harmony and cooperation among those concerned. Since major religions seek to promote mental peace and group solidarity, activities such as stealing are considered “bad” given that they often lead to contrary results in others—results, according to PCT, that are due to the error signals produced, not avoided, or not eliminated. Similarly, it is considered bad in many religions to commit adultery, since doing so may produce serious error signals in one’s spouse and possibly other people concerned.

Other religious commandments and rules that prohibit certain behaviors seem to exist for similar reasons. As the Dalai Lama has pointed out, “actions that one ought not to do, such as killing, stealing, adultery, lying, and so forth – they all involve varying degrees of harm against

¹³ As you may recall from our overview of PCT, error signals are due to a difference between the person’s perceptions and related references.

¹⁴ Dick Robertson wrote something similar in a posting to csgnet on 3 December 2007: “What feels ‘right’ feels good because there [is] no sense of error.”

¹⁵ Richard Marken, in several postings to csgnet@listserv.uiuc.edu on 3 December 2007.

others.”¹⁶ Such prohibited behavior seems to be especially bad and “evil” when the error signals produced reflect that great harm has occurred or may occur to a person or group.

And so, we seem to have an answer to the question “Why did religious leaders and God, if he did so, establish commandments, rules, and guidelines as to what to do and what to avoid doing. Considering PCT, a reason seems to have been to produce as much happiness and avoid as much unpleasantness in our lives and the lives of others as possible. That is, they did so to achieve references that were important to them, as the following sections explain further.

Happiness and Suffering

Related to the above, are our feelings of happiness. Personal happiness seems to be a major function of religious faith.¹⁷ For example, “one strand of Jewish thought suggests that enduring human happiness is only possible through a life dedicated to the service of G-d and the perfection of ...character traits.”¹⁸ Relatedly, the Dalai Lama has written that “I believe that the very purpose of our life is to seek happiness.”¹⁹ Similarly, based on his research among Christians, Ellison states that “individuals with strong religious faith report higher levels of life satisfaction, greater personal happiness, and fewer negative psychosocial consequences of traumatic life.”²⁰

From a PCT perspective, feelings of happiness and satisfaction occur when important error signals are reduced, eliminated, or avoided. With PCT in mind, it thus seems that a function of religion is to reduce, eliminate, or avoid error signals. Briefly, in a religious layperson’s terms, this idea might be stated as “the purpose of life is to do what is proper and right according to my religion” and “when we do so, we will be happy.”

Conditions that may be considered opposites of happiness are anxiety, distress, misery, and other forms of suffering. In PCT terms, such unpleasant conditions are caused by error signals resulting from differences between our perceptions and our references. Religious practice seeks to have people avoid or deal with such error signals, especially ones related to references that are important to that religion as specified in its Commandments, rules, rituals, guidelines, and other important references.

¹⁶ Lama, *Kinship of Faiths*, 113.

¹⁷ Ralph W. Hood, Peter C. Hill, and Bernard Spilka, *The Psychology of Religion: An Empirical Approach* (New York: Guilford Press, 2018), 493 citing Christopher G. Ellison, “Religious Involvement and Subjective Well-Being,” *Journal of Health and Social Behavior*, Vol. 32 (March 1991), 80-99.

¹⁸ Timothy A. Sisemore and Joshua J. Knabb, *The Psychology of World Religions and Spiritualities: An Indigenous Perspective* (West Conshohocken, PA: Templeton Press, 2020), 77. Note that the word “G-d” is purposefully written in the quote rather than “God” as a sign of respect.

¹⁹ Dalai Lama, *The Art of Happiness: A Handbook for Living* (New York: Riverhead Books, 1998), 13.

²⁰ Ellison, “Religious Involvement,” 80.

For example, a basic Buddhist teaching and “Truth” is that attachment is the cause of all suffering. Such “suffering, or *dukkha* as it is called, “refers to all unsatisfactory states and experiences, many of which are not explicitly painful.”²¹ The term includes dissatisfaction, irritation, anxiety, frustration, craving, and other forms of stress.²² PCT explains why such states are unsatisfactory and lead to suffering. They are due to error signals! In other words, “attachment” as viewed by PCT refers to having a reference that is important and matters to an individual -- for example, a value, goal, purpose, duty, or ideology. If the reference is important, the person is attached to it. And so, when our perceptions are different from such references, error signals and suffering occur. Buddhism like other religious traditions, by means of its teachings and practices, helps its adherents avoid and cope with such suffering and achieve happiness.

However, it seems that happiness does not only depend on the achievement of religious references. Apparently, the achievement of other references, including ones that may be unconscious, can help us achieve happiness. For example, even getting a good night’s sleep can lead to better moods during the next day as well as better health and happiness.²³

Why Do Religious Leaders and Others Behave as They Do?

Why did religious leaders establish the rules, guidelines, and other religious references that now exist? Why do religious leaders and followers now act according to those rules, guidelines, and the expectations of others including God when relevant? According to PCT, people in the past did these things, as do people behave now-a-days, for the same reason: To control perceptions that mattered to them -- that is, to achieve goals, objectives, and other references that were important to them.

What were these goals, objectives, and other references? For past leaders, we can only speculate. But given what they did, some of these, for example, seem to have been one or more of the following: to follow the will of God and/or the Gods as they perceived it to be, to avoid conflict and violence among people, to achieve social harmony, and/or to influence and control people in ways that they deemed to be important. Even today, according to PCT, that is why leaders do things, be they religious or non-religious.

The same hold for the followers of religions. They follow religious guidelines and rules to achieve references such as those just mentioned as well as to achieve other religious and non-

²¹ Bhiksu Tenzin Gyatso and Bhiksuni Thubten Chodron, *Approaching the Buddhist Path* (Somerville, MA: Wisdom Publications, 2017), 279.

²² Scott J Fitzpatrick et al., “Religious Perspectives on Human Suffering: Implications for Medicine and Bioethics,” *Journal of Religion and Health*, vol 22 (2016): 159-173.

²³ A good general book on happiness is *The How of Happiness: A New Approach to Getting the Life You Want*, by Sonja Lyubomirsky (New York: Penguin Books, 2007). Not only does the author discuss happiness and practicing religion (pp. 228-239), sleep, health, and happiness (p. 250), she discusses many other elements of happiness.

religious goals, objectives, and other references important to each of them, such as to go to heaven upon one's death, to be respected as a good person, to avoid censure and punishment from God and others, and so on, depending on what those references are for each individual, since they differ from person to person.

So, what are these "references"? We have many words that refer to them as Table 2 indicates. Most references such as those shown are learned while others, such as biological "set points" for oxygen levels in our blood, are built into us as "intrinsic references."

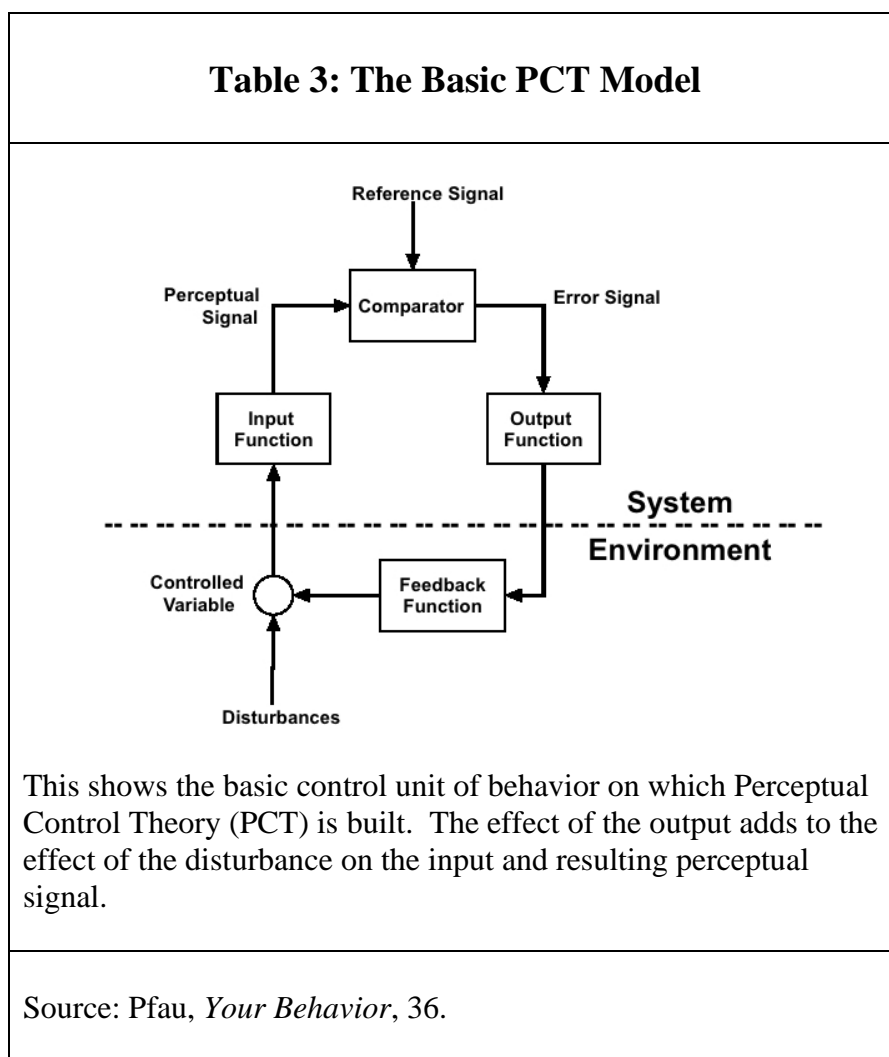
<p style="text-align: center;">Table 2 Words Indicating Religious and Other References</p>
<p>Common Terms: commandments, rules of behavior, ideals, values, goal, purpose, objective, intention, intent, desire, want, need, aim, value, preference, ambition, reason, concern, priority, plan, strategy.</p> <p>Social Terms: duty, moral or legal obligation, traditions, rituals, taboos, assurance, promise, pledge, commitment, solemn word, vow, word of honor, principle, norms, ideology, expectations of others, role, responsibility, chore, lawful/legal behavior, traditions, taboos, mores, worldview, mores, worldview.</p> <p>Terms Referring to Sequences: standard procedure, modus operandi. script, schema, program, musical/dance score, choreography, critical path, recipe.</p> <p>Scientific Terms: reference signal, reference value, set point, command signal, equilibrium point, stable state, desired state, goal state, optimal outcome, internal standard, function, phobia.</p> <p>Organizational Terms: target, mission, task, plan, blueprint, standard, assignment, strategy, benchmark, criteria, checklist, schedule.</p>
<p>Source: Adapted from Richard Pfau, <i>Your Behavior: Understanding and Changing the Things You Do</i> (St. Paul, MN: Paragon House, 2017), 33.</p>

These references vary from person to person. Some are similar, such as among followers of a particular religious tradition or culture. Others are different, often most obviously among members of different traditions and cultures. For example, a person of one religious tradition may have a reference to "save" as many people as possible by trying to convert them to his or her religion. A person of another religious tradition may have a quite different reference, for example to freely share information about his or her religion and its teachings to people who are

interested, but not to actively convert others. Such differing references result in obvious difference in behavior as we can see, for example, between Evangelical Christians and Buddhists.

According to PCT, in addition to references, other things also affect what religious leaders, followers, and others do and have done from moment to moment. These range from broad environmental factors or “disturbances” as PCT calls them, such as climate and geography, to more specific “disturbances” such as the actions of one’s parents, peers, teachers, co-workers, and others, and things such as roads, buildings, media, and the weather outside at the moment.

Such internal and external factors are reflected in the basic PCT model of the nervous system and the environment outside of a person’s nervous system shown in Table 3.



As shown by the diagram, we do things (i.e., have outputs) that affect things in our environment (i.e., controlled variables), to produce perceptual signals that match reference signals that we have. In other words, PCT explains that ***When you do something, you do what you do in order***

*to change or maintain your perceptions. Behavior is the process by which we act on the world to control perceptions that matter to us.*²⁴ And this holds not only for you but for everyone else, including religious leaders, both past and present.

Some Other PCT Explanations, Examples, and Linkages

As indicated, PCT can be used to understand religious behavior as well as many related concepts. Here are a few more examples.

Rituals: Rituals are routinized behaviors that are performed repeatedly, such as daily prayers, sacrifices, feasts, fasts, protocols for grieving and for celebrating, prescriptions how to marry and how to divorce, ceremonies to perform when a child is born, or to cast out demons, or to invoke the Almighty during battle.”²⁵ PCT has modelled the neural control systems in our bodies such as the one shown in Table 3 into a hierarchy of control systems. Religious rituals such as a prayer that is the same from one occasion to the next is at a level in the hierarchy of control systems called “sequences.” More complicated rituals such as marriage and funeral ceremonies are at a higher level in the hierarchy called “programs.” Each ritual, whether simple or more complicated, has its own references for performing it.

Honesty, Compassion, and Love: Above the program level in the PCT hierarchy is a level called “principles.” Such principles include references for behaviors such as honesty, compassion, and love of other. These principles are expressed as reference signals that activate lower-level control systems that result in behavior and resulting perceptions.

Prayer: Many people pray daily, some several times a day, and on special occasions. Others do so occasionally. Clearly, according to PCT, such people have references for doing so, for example, because it’s the right thing to do or, in some cases, to avoid censure from others for not behaving properly.

Similarly, when facing important error signals, either occurring now or anticipated, we do what we think will work. If appropriate action is clear, we just do it, often automatically. If appropriate action is not clear, according to PCT, we may try various things randomly until something seems to work. Prayer may be used either because we believe that it works or because we consider it to be a factor that will at least increase our odds of success. In other words, “when people are in dire straits...it is not uncommon to seek divine help.”²⁶ Or as PCT would explain it, when facing terrible consequences, many people seek divine help by praying or

²⁴ Pfau, *Your Behavior*, 22.

²⁵ Paloutzian, *Invitation*, 269.

²⁶ Hood et al, *Psychology of Religion*, 51.

performing other religious rituals to deal with the error signals that they are facing or that may occur.

Social Control: Religious leaders and followers are adept in establishing references within people – for example, by setting a good example, by sermons and other teachings about religious rules and commandments, and by providing religious texts for inspiration and guidance. These references, when perceived to be violated or in danger of being violated, lead to error signals that may then result in actions aimed at controlling the behavior of those violators or potential violators. Table 4 contains examples of social control techniques used to avoid and deal with such error signals.

Table 4
“Social Control” Techniques Used by Religious Adherents

“Social control” as used here refers to techniques used by members of religious societies as they attempt to assure the religious-norm-conforming behavior of others. Examples include:

Religious and Supernatural – commandments, rules, sermons, religious schools including “Sunday School”, texts and other publications, the concept of sin and its consequences, excommunication, rewards and punishments individuals receive upon their death.

Informal – a pat on the back, a smile, a kiss, a hug, praise, a compliment, giving recognition of achievement, expression of disappointment or anger from a parent or others, corrections, frowning, glaring or staring at someone, verbal insults, scolding, silent treatment, withdrawal of friendship, ignoring, shunning, avoiding, excluding, rejecting, beating, ostracism.

Legal (ex, in countries influenced by major religious systems) -- laws; penalties provided by the state for violations of law, including use of force by the police, imprisonment, exile, and death; rewards such as qualification for government positions, tax breaks and deductions.

Other – counselling, therapy, rituals.

Note: Many of these techniques as well as others are also used by non-religious persons including people indirectly influenced by the religious-oriented societies in which they were raised, lived, or are now living.

Looking at the world's major religions more broadly, we can say that they are "large-scale collective control networks"²⁷ that help to overcome the natural self-centered tendencies that are built into us "self-centered" humans. We are naturally self-centered since, as PCT indicates, our nervous systems function to reduce and avoid error signals, thereby enabling us to survive and achieve perceptions that we desire. If we were not so self-centered, we would be dead.

Conclusions

This paper indicates how PCT is relevant to and congruent with a great deal of religious thought and action. Not only does PCT explain why many religious guidelines lead to benefits such as harmony among people and the avoidance of conflict, it also explains why religious leaders and others do and have done the things they do. PCT also provides explanations for many religious concepts such as good and bad, virtuous and evil behavior, the "Golden Rule," and prohibitions against stealing, killing, and sexual misbehavior. Rather than being just abstract discussions, these explanations are based on the biology of how our nervous systems function.

PCT is indeed a meta-theory that is relevant to many areas of life and thought. Given its ability to help understand and explain so much, it seems appropriate for religious leaders, teachers, and others interested in human behavior, its influence, and the psychology of religion, to become better acquainted with PCT, since, at present, religious references to PCT are almost nonexistent.

²⁷ Kent McClelland, "Social Structure and Control: Perceptual Control Theory and the Science of Sociology," in *The Interdisciplinary Handbook of Perceptual Control Theory: Living Control Systems IV*, ed. Warren Mansell (London: Academic Press, 2020), 257.