

Psychology of learning: An Islamic theory

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Abstract: The objective of this article is to provide an Islamic perspective on the psychology of learning. This is a theoretical study based on reviews of secondary sources on Islamic and conventional psychology. It analyzes four conventional theories namely classical conditioning theory, operant conditioning theory, observational learning theory, and insight learning theory. It is argued that the fundamental elements of these theories go against the Islamic belief system, but certain other elements conform to Islamic beliefs. Referring to ibn Sina and al-Ghazali's treatment of many aspects of these theories and reflecting on the practices of the Companions during the time of Prophet Muhammad (SAW), the article argues that the fundamental difference between the conventional theories of psychology of learning and the Islamic theory of psychology of learning is the factor of human soul. In conventional theories, the soul as a factor is completely discounted, while in Islamic theory it is considered to be central.

Keywords: Psychology, Learning, Islamic theory of learning, Islamization of psychology.

Introduction

Islamization of social science disciplines has been an articulated objective of the Islamization of Knowledge project over the past few decades. Psychology, as a discipline, has not been adequately dealt with from an Islamic perspective. This article is an attempt to provide an Islamic model and approach to the psychology of learning. The objectives of this article are: (1) to provide an Islamic overview on the concept of learning; (2) to evaluate contemporary learning theories from an Islamic perspective; (3) to integrate various learning theories to form an Islamic

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model of learning; and (4) to illustrate the application of the Islamic learning model from the biography of the Prophet. The article assumes that the readers have a working knowledge of the psychology of learning including familiarity with classical conditioning, operant conditioning, and observational learning or will be using this article in conjunction with psychology of learning textbooks. Therefore, this article focuses more on evaluation of theories as compared to description of theories of learning.

Islamic overview of the concept of learning

Contemporary psychology defines learning as the process by which experience or practice results in a relatively permanent change in behaviour or potential behaviour (Klein, 2002; Walker, 1996). According to Islam, the source of learning for human being can be *ilahi* (divine) or *insani* (human) (Najati, 2001). *Ilahi* source of learning means learning that occurs directly from Allah (SWT) such as *wahy* (revelation) which only the prophets receive. Learning from the same *ilahi* source also takes place indirectly which are called *ilham* (inspiration/intuition), and *ru'ya sadiqah* (realistic dream). Whereas *insani* source of learning means learning that occurs from human experience through conditioning, observations, cognitions, and such. Regardless of the sources of learning, Muslims believe that Allah is the ultimate source of learning or behavioural changes. It is He who teaches us what we knew not (Qur'an, 96: 5). And it is He who teaches us the Qur'an and ability to speak (Qur'an, 55: 2 & 4).

Obviously, learning from Allah (SWT) directly or indirectly requires the souls of human to be at highest level of *iman* (belief). Since contemporary Western psychology does not include soul as a subject matter of studies, the *ilahi* (divine) source receives no attention in the psychology of learning textbooks. And since Islam believes that human beings consist of both body and soul, Islamic perspective on how a person learn from *insani* (human) experience also differs compared to contemporary Western psychological perspective. Many of the learning phenomena that cannot be explained by contemporary theories of learning (such as drastic change of behaviour of those who perform *hajj* or pilgrimage) can actually be explained if we believe in the existence of the soul. In short, Islam believes that soul as an essential and more substantive part of humans has enormous influence in human learning. This is the single most important difference between Islamic concept of learning and contemporary Western concept of learning.

An Islamic Critique of Contemporary Learning Theories

There are several Western theories of learning including (1) classical conditioning theory; (2) operant conditioning theory; and (3) cognitive theories of learning (which includes observational, and insight learning). These theories need to be evaluated from an Islamic perspective.

1. Classical conditioning

Classical Conditioning involves giving a (conditioned) response to a neutral stimulus (which has become a conditioned stimulus) that has been associated with another unconditioned stimulus (Ormrod, 1999; Walker, 1995). It should be noted that even in psychology syllabus at A level (Eysenck & Flanagan, 2001), students are made aware of scientific criticisms of classical conditioning so that they do not accept blindly whatever theories originated from the West. Classical conditioning cannot explain all types of learned behaviour. Sometimes a response may not be elicited as a result of association between two stimuli as postulated by classical conditioning principles but more as a result of neural communication that occurs in the brain (Klein, 2002). This neural activities can be triggered by variables such as memory, emotion, and motives; variables which are considered unscientific in Pavlovian and Watsonian classical conditioning. By adding the element of the soul, it is possible to explore the possibility that iman-based activities such as *dhikr* (utterance and remembrance of Allah's name) can influence the memory, emotion, motives, or even the excitation or inhibition of neural activities.

From an Islamic perspective, classical conditioning, which is the backbone of early behaviourism can be atheistic in terms of *`aqidah* (belief system). Badri (2000) quoted J. B. Watson (the father of classical conditioning) to show how Watson disliked treating humans as animals "with something else in addition" because this something else is a trouble to science. Included in this "something else," according to Watson, are religion (*din*), hereafter (*akhirah*), moral (*akhlaq*), and love which are major *`aqidah* issues in Islam! Believing totally in the philosophy of classical conditioning is like converting to another religion with Pavlov and Watson as prophets! This underlying assumption about human nature is against Islamic *`aqidah* and *shari`ah*.

To adduce arguments against classical conditioning should not be a pretext to throw the theory altogether from school texts on psychology of learning. Throwing the theory from the texts may not be a good strategy for at least two

reasons. First, if students are not taught about classical conditioning and the works of Pavlov and Watson, they will read it somewhere else and be influenced by it (Badri, 1979). It is the teachers' job to explain the atheistic aspects of classical conditioning and make the students immune to them. Second, the atheistic aspects only involve the philosophical aspect of classical conditioning, not the principles or the applications. Not all principles of classical conditioning are unIslamic (Badri, 1979). In fact, some of the principles have been introduced long ago by early Muslim scholars such as Ibn Sina and Al-Ghazali. The difference is that early Muslim scholars did not subscribe to the mechanistic principles of current classical conditioning principles.

Ibn Sina and al-Ghazali both believed in the importance of association between stimuli to elicit a conditioned response. The main difference between their ideas and contemporary classical conditioning is that they include the cognitive aspects (e.g. memory and imagination) that moderate the stimulus-response relationship which is absent in contemporary "mechanical" classical conditioning perspective. Ibn Sina believed that the association between unconditioned and neutral stimulus must be kept in *memory* before it can become a conditioned stimulus (Badri, 1997; Najati, 1993; Taha, 1995). He gave examples of how seeing food (without even eating it) is pleasurable and seeing sticks (without even been beaten by it) is painful. Ibn Sina also suggested that a person can feel disgusted (a conditioned response) with yellow honey (a conditioned stimulus) if he associates its colour with yellow bile (neutral stimulus).

Al-Ghazali went a step further by giving an example of what is now known as Pavlovian "stimulus generalisation" when he observed that a person who was bitten by a snake is momentarily phobic of a colourful rope. He also went another step further, much earlier than Pavlov, by using salivation as his example. Al-Ghazali said that observing a person eating an acidic fruit, or even *imagining* such a scene, can make the observer (or the imaginer) salivate. Not only was that an advanced theory at that time, it also adds to the current deficient theory by introducing the cognitive aspect of learning such as imagination. All these examples are mentioned in much more detail by Badri (1997), Najati (1993), and Taha (1995).

In short, although the philosophical aspects of classical conditioning can be dangerous to a Muslim's *iman* (faith), its principles can be accepted with some modifications, which include physiological and cognitive factors. In addition, the susceptibility of a person to be conditioned to a certain stimulus also depends on the soul's level of *iman* in such a way that the person will never give a response that is unIslamic in terms of *`aqidah*, *shari`ah*, or *akhlaq*.

2. Operant conditioning

According to the theory of operant conditioning, a response followed by a reinforcer (favourable stimulus) is strengthened and is, therefore, more likely to occur (Ormrod, 1999). The opposite effect can be said when a response is followed by a punisher (aversive stimulus). Similar to classical conditioning, operant conditioning too has been scientifically criticised as early as in an A-level psychology textbook (Eysenck & Flanagan, 2001). Operant conditioning is insufficient to explain most of human behaviours. Some, like Klein (2002), contended that the power of reinforcement is not absolute in explaining all behaviours. Some criminals who are punished repeatedly for their crimes continue to commit crimes. In some instances, the criminal actions increase in frequency as well as severity (Benda, 1999)! Variables such as self-awareness and empathy have been suggested to correlate with regulation of anger. Perhaps that is why rehabilitation intervention programmes in the prison have taken into account psychological growth with the aim to decrease the probability of repeated offence (cf. Bourke & Van Hasselth, 2001). However, the idea of psychological growth as an independent variable should take into account the moderating influence of soul. A strong soul may decrease the likelihood that such behaviour is repeated after a punishment is given.

Similar to classical conditioning, operant conditioning philosophy is also atheistic from an Islamic perspective. Operant conditioning, which is the backbone of later behaviourism, was introduced by Skinner. Skinner, as quoted by Badri (1979), said that behaviours termed right or wrong (which Muslims consider *halal* or *haram*) are nothing more than contingencies of responses towards immediate and tangible rewards and punishments, and have nothing to do with the concepts of good and bad. As such, Skinner's theory renders Muslim beliefs of *akhlaq*, *'ibadah*, and even *tawhid* to just illusions!

Again, there is no need to abandon the principles of operant conditioning altogether just because of its atheistic philosophical stance (Badri, 1979). The concept of learning or training through conditioning itself is not alien to Islam. The Qur'an (5: 4) mentions how ancient Arabs conditioned dogs and falcons in order to hunt for them. Prophet Muhammad (SAW) also had mentioned how a person's response is influenced by its consequences by saying that "A *Mu'min* (believer) will never step into the same hole twice" (narrated by Al-Shaykhan, Abu Dawud, and al-Shaybani). Badri (1997) reported that Al-Ghazali believed that ethical and emotional habits can be learned and trained. On a broader

perspective, the concepts of *jannah* (paradise) and *nar* (hell-fire) are based on rewards and punishment principle. This is because, it is in human nature to try to seek pleasant feelings and avoid unpleasant stimuli (Badri, 1979). To a very pious Muslim, even receiving Allah's pleasure is rewarding enough and receiving Allah's displeasure is punishing enough. The major differences between operant conditioning and Islamic concepts of rewards and punishment is that, in Islam, the stimuli are intangible and delayed (as late as hereafter!). Not only cognitive factors play a role here, but also the soul factor, i.e. the level of *iman*, can influence whether Islamic stimuli are rewarding or punishing enough.

Contemporary Western psychology advocates that punishment is less effective than reinforcement (Ormrod, 2001). This concept is not alien to Islam either. A *Hadith* reads: "When Allah decreed the Creation, He pledged Himself by writing in His book which is laid down with Him: My *mercy* prevails over my *wrath*." That is why a Muslim may receive 10 rewards for doing one good deed but only one sin for doing one bad deed. Better even that a Muslim who has the *niyyah* (intention) to do good deed may receive rewards whereas a Muslim who has intention to do bad deed will not be considered committing a sin before he or she actually does it. There is also a *da`wah* principle that *al-tarhib* (making people feel fear) should be prioritised before *al-tarhib* (making people feel fear) when promoting Islam (Abdul-Aziz, 1997) which is in line with psychological concept to prioritise reinforcement over punishment.

Even when punishments are enforced in Islamic tradition, they are usually administered to those who really understand their wrongdoings. For example, beating children who do not perform prayer is only allowed when they are ten years old, *only* after educating them about the importance of prayer *three years before* that (based on a hadith narrated by Ahmad). In other words, understanding the reason of punishment is a pre-requisite before executing it which is similar to what Western psychology has said. The story of Ka`ab bin Malik who refused to be exempted from punishment (social isolation) for being absent during the War of Tabuk also shows his understanding of his wrongdoing. A careful reading of *hadith* literature and the biography of the prophet will show that new Muslims, simple-minded Bedouins, and *Munafiqun* (hypocrites) were rarely punished.

Muslims whose souls have higher level of *iman* usually voluntarily ask for worldly punishment in order to avoid the punishment in the hereafter. There are only two instances of *hudud zina* (penalty for adultery) ever executed during the Prophetic era. This happened only after both culprits made self-confession and

voluntarily asked to be punished (the case of Ma`iz ibn Malik and the lady of *al-Ghamidiyyah*). Likewise, it is well known that when the Companion of the Prophet (SAW) did something wrong, they would self-select the type of punishment and self-administer it themselves. `Ulwan (1988) had listed several instances illustrating self-administration of punishment (*al-mu`aqabah*) which he collected from the book *Mukhtasar Minhaj al-Qasidin*. One of the instances given is about a companion named Abu Talhah, an orchard owner, who was performing his prayer when a bird passed by. His concentration shifted from the prayer to the bird to the extent that he had forgotten the sequence of acts in prayer. Feeling guilty, he had given his whole orchard to charity, obviously believing that it was his orchard that has attracted the bird to fly by, and eventually disturbed his prayer. Based on the above-mentioned examples, perhaps it can be assumed that, the reason of punishment really work in those cases because, ironically, the punishment is indirectly rewarding! All the examples of operant conditioning so far show that soul can play the moderating factor in influencing the stimulus-response relationship.

Clearly, contemporary operant conditioning theory of reinforcement cannot be applied to Muslims with high level of *iman*. For a Muslim, just by having faith that he or she will receive rewards, *jannah* (paradise), or Allah's pleasure can be a positive reinforcer. Similarly, just by having faith that he or she will receive punishments, be condemned to *nar* (hellfire), or Allah's displeasure can be a punishment. In addition to that, a Muslim who has faith that Allah will always accept *tawbah* (repentance) from His servant (if he or she asks for it sincerely) it can act as a negative reinforcer (alleviating the guilt-feeling that can lead to anxiety and depression).

The concept of rewards and punishment in Islam can be explained from the perspective of schedules of reinforcement (continuous and partial). Although the concepts of rewards and punishment in Islam are based on continuous schedule (awarded each time after we perform good or bad deed), there is an element of variability in terms of interval and ratio because the rewards and punishments are unobservable. Therefore, they can become powerful motivators for Muslims who have *iman* in practicing *ma`ruf* (good) and avoiding *munkar* (evil). It is appropriate, however, to administer observable rewards to non-believers who are sympathetic to Islam or are new converts. This is the underlying reason for giving *zakat* money to *mu'allafah qulubuhum* (people with sympathetic feeling). This is also the reason why Prophet Muhammad (SAW) gave the war booty to the *Tulaqa'* (new Muslims from Makkah) after the War of Hunayn

instead of giving it to the highly committed Muslims from Madinah. In this case, although initially the Muslims of Madinah were not satisfied, eventually, *iman* prevailed over the needs for worldly rewards. Since the soul (with its various level of *iman*) can influence the relationship between reinforcement and response, observable rewards can be used to motivate, not only non-Muslims and new Muslims, but also Muslims with weak *iman* or even children whose *iman* is not yet fully developed. For Muslims who want to maintain his souls in the state of *iman*, reading the Qur'an regularly and understanding its meaning is suggested to receive regular "spiritual" and "cognitive" rewards and/or punishments by reading Allah's personal praises and warning directed to each individual reader.

More specifically, on the concept of reinforcement schedules, Prophet Muhammad (SAW), with inspirations from Allah (SWT), had been using variable partial or intermittent reinforcement schedule to motivate consistent rate of response from Muslims. The two examples concerning this are the time of *al-istijabah* when Allah will grant whatever His servants wish for during an unspecified time at night (based on a *hadith* narrated by Muslim) and during an unspecified time on Friday (based on a *hadith* narrated by al-Shaykhan, Malik, and Nasa'i). The most famous application of partial reinforcement schedule is the multiplied rewards during an unspecified night in the last ten days of Ramadan (based on two *hadith* narrated by al-Shaykhan and al-Tirmidhi). If a Muslim is spiritually motivated to receive unobservable, delayed rewards, then the above-mentioned partial reinforcement schedules will lead to a high and consistent rate of response. Needless to say, soul plays an important role in moderating the response towards reinforcement.

3. Observational learning

Observational learning is based on Bandura's (1986) social learning theory according to which people will imitate other people's behaviour depending on the outcome of the behaviour. Unlike classical and operant conditioning, observational learning incorporates both cognitive and social factors in explaining behavioural changes. However, observational learning still cannot explain all behaviours. Existing literature show that elements of social learning theory are relative, rather than absolute in shaping learned behaviours (Curran, White, & Hansell, 2000). Roger (2003), for example, found that observational learning merely accounted for 22-24% of the variance in alcohol use and delinquency and 6% in the prediction of drug use. The strongest predictor actually, is moral disengagement. Other researches (Benda & Corwyn, 2000) have indicated that

religious factors, over and above the elements of observational learning, seem to predict criminal behaviour. These researches supported the notion that soul as a variable should be taken into account when explaining learned behaviour.

Islam emphasises learning by observing a model. Prophet Muhammad (SAW) has always directed his companions to learn *salat* (prayer) and *hajj* (pilgrimage rituals) by observing him doing it. The Qur'an (5: 31) illustrates how Cain (*Qabil*) learned to bury the corpse of his brother Abel (*Habil*) by observing a raven who scratched the ground to bury another dead bird. Another example of observational learning took place when the companions initially refused the Prophet's order to perform *tahallul* to cancel their *'umrah* but later obliged after *observing* the Prophet performed it first. Some theorists believe that an observer needs to observe that the model being "rewarded/ punished" before reproducing the behaviour performed by the observer. Based on the examples given above, it seems that the model does not need to be rewarded in order for the observers to reproduce the behaviour. In the example of Cain, his soul's needs for guidance (*hidayah*) might have led him to model the bird's behaviour. And in the case of the Companions, their souls' needs to follow the Prophet (SAW) as the spiritual guide might have led them to model the Prophet's behaviour despite being frustrated of not having the opportunity to perform *'umrah* in that particular year.

Prophet Muhammad (SAW) has been a role model for all Muslims who hope to seek the pleasure of Allah (SWT) and salvation in the hereafter (Qur'an 33: 21). However, based on observational learning, it can be quite impossible to explain how can Muslims nowadays imitate or model the behaviour of the Prophet (SAW) who had died 14 centuries ago. Perhaps the acceptance of the Muslims' souls that Muhammad (SAW) is the Messenger of Allah provides a state of readiness to learn from an unobservable model. In addition to that, numerous *hadiths* and detailed descriptions in *sirah al-nabawiyyah* (biography of the Prophet) about Prophet's words, actions, and agreements, facilitate a higher-level or "virtual" observational learning. Clearly, without *iman* in the soul, this kind of learning could not have taken place. Another limitation of observational learning is that soul's influence on learning can be more powerful than the model itself. The Qur'an (66: 10) shows that even with the presence of an ideal model (a husband who was a prophet), the wife of Noah (Nuh) and the wife of Lot (Lut) followed the unbelievers instead of their husbands. In contrast, the Qur'an (66: 11) gave an example of the wife of a Pharaoh who had a bad model (a husband who claimed to be a god), but she refrained from following him, and instead

followed the right path with Prophet Moses (Musa). In other words, soul can play an important role as moderator to observational learning.

4. Insight learning

Insight learning involves a sudden restructuring or reorganization of a problem (Walker, 1996). Criticisms of the theory include research results not replicated and perhaps the learning can be better explained by operant conditioning theory (Eysenck & Flanagan, 2001). As mentioned earlier, learning from Allah (SWT) can be direct or indirect in the forms of revelation, inspiration, and realistic dream. All these types of learning are considered a higher-level of insight learning and can never be explained without believing in the existence of the soul, and can never be obtained without the soul having a higher level of *iman*. Since only the prophets are given the privilege of receiving revelation (*wahy*), the authors in this article only talk about inspiration and realistic dream.

There are many examples in the Qur'an that illustrate the concept of learning through inspiration and realistic dreams which are sometimes labelled as *'ilm al-ladunniyy* (worldly knowledge). Najati (2001), based on the Qur'an and Hadith, has given several examples illustrating learning by inspiration. Some of these are mentioned below:

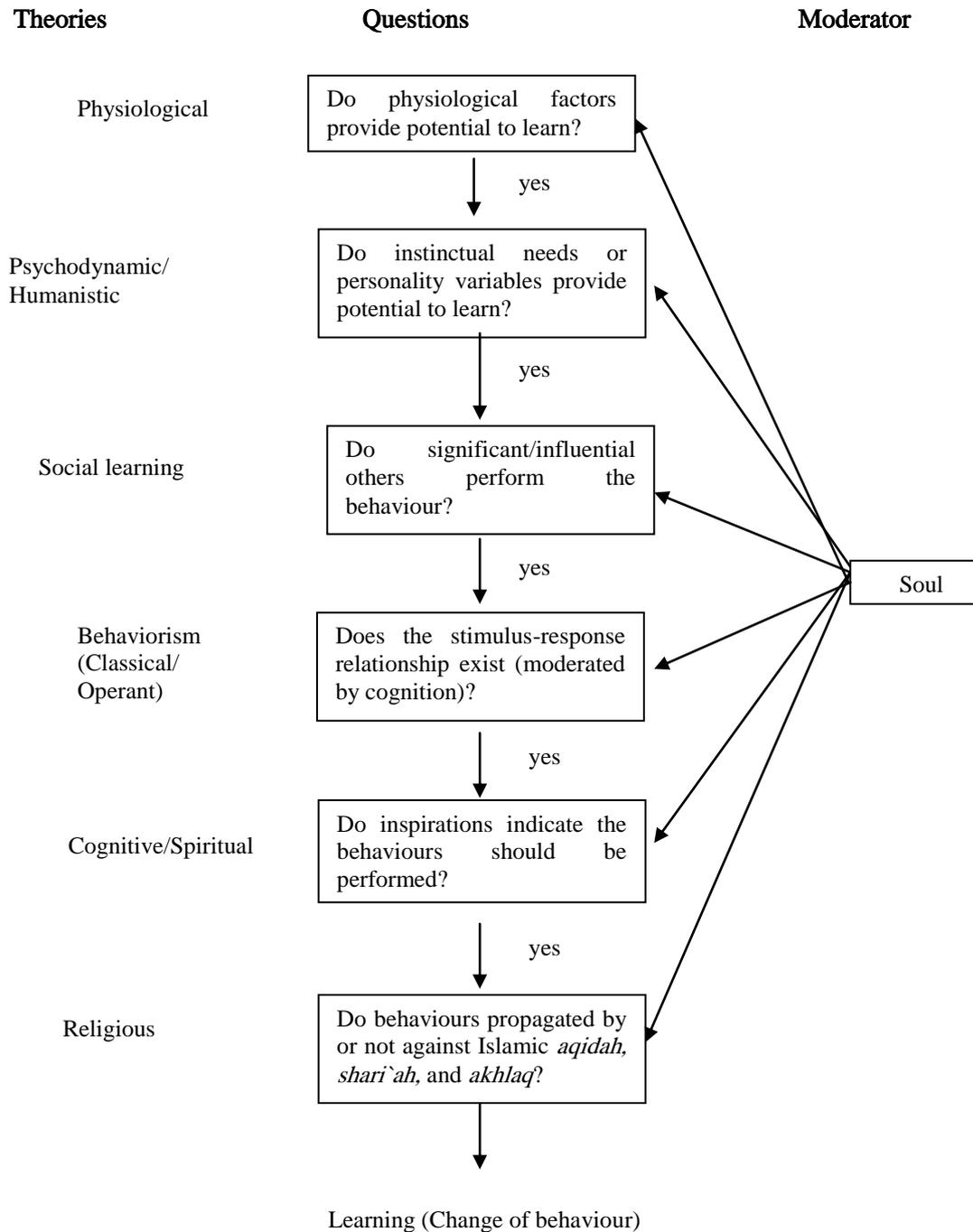
1. Prophet Sulayman's (Solomon) intuition to differ with his father Prophet Dawud (David) on a legal matter (Qur'an 21: 78-79).
2. Inspiration to Prophet David to make an armour suit (Qur'an 21: 80).
3. Prophet Yusuf's (Joseph) inspiration in interpreting dreams (Qur'an 12: 6, 21-22 & 93; 2: 37).
4. Prophet Ya`qub's (Jacob) inspiration pertaining to his son Joseph (Qur'an 12: 86 & 96).
5. Inspiration to a faithful servant of Allah (Qur'an 18: 65-66).
6. Inspiration to non-prophets such as the mother of Prophet Musa (Moses) (Qur'an 20: 38-39; 28: 7) and the disciples of Prophet Isa (Jesus) (Qur'an 5: 111).
7. A hadith relating that `Umar is a *muhaddath* (a person who is given inspiration) (narrated by al-Bukhari), and that the truth is with `Umar's tongue (narrated by Ahmad).

When discussing about inspiration and dream as sources of learning, and especially sources of *shari`ah* to guide Muslims' behaviour, we have to understand that they are not part of the valid *dalil* (evidences) in Islamic *shari`ah*. This matter has been detailed out by al-Qaradawi (1997) when he described the third principle of *al-Fahm* (understanding) explained by Hasan al-Banna. Since Islam is concerned about scientific values such as the accuracy of the source of insight as source of *Shari`ah* rulings, it can be said that not all insights will lead to correct or desirable learning. Insight learning is a valid phenomenon, but only the soul with high level of *iman* can get true learning from it.

Suggested Islamic model of learning

Reviews on various theories mentioned above show that every theory has some truth and is supported by Islam but has its own limitations in giving a full picture of human learning. Psychology should take into consideration all these theories and incorporate Islamic perspectives of learning in order to give an alternative, more comprehensive look of human learning. Scientific and Islamic experiments show that learning principles should take into consideration physiological, personality, environmental, cognitive, spiritual, and other factors. According to Badri (1997), al-Ghazali had long before talked about learning ability as influenced by some heritable and instinctual factors, individual differences, stimulus-response relationship, and cognitive factors without neglecting the influence of the soul. The model that the article suggests is a combination of the existing theories and al-Ghazali's views (Figure 1). The model of human learning proposed is not developed based on past cumulative research. It is rather a loose model to guide future research and to make sense of unexplained factors found in various theories from the West. The model incorporates not only the learning theories like classical conditioning and operant conditioning but also major theoretical perspectives in psychology (physiological, psychodynamic, humanistic, cognitive, and behaviourism) together with spiritual perspective in explaining learned behaviour.

Figure 1: The Islamic Model of Motivation



Islamically-oriented applications of learning principles

The application part of the learning model is illustrated by the change of behaviour of the Companions of Prophet Muhammad (SAW) who were able to change their behaviour of heavy drinking (alcoholism). Modern Muslim psychologists may use the same principles in changing the bad behaviour of contemporary Muslims such as alcoholism, drug abuse, and smoking. The application is inspired and adapted from the writing of Badri (1976) on "Islam and Alcoholism." The word alcohol used in this article refers to liquor for drinking, not for chemical use.

Physiological perspective

It is understandable that most Arabs at that time were alcoholic because their forefathers had been alcoholic, and this had possibly provided genetic, neuronal, or hormonal potentials for the Companions to become alcoholics as well. But since the inception of Islam, some of the Islamic practices may have changed the physiological potential to a more positive side. Practices such as *wudu`* (ablution), *salat* (prayer), *dhikr* (utterance and remembrance of Allah), *tilawah* (reading the Qur'an), and *sawm* (fasting) may have provided positive potential to prepare for abstinence from alcohol. Besides that, some worldly practices such as proper diet (semi-vegetarian), eating supplement (honey and *habbat al-sawda`* or black seeds), and exercises (preparing for Jihad) may also have provided positive potentials to change behaviour. Supported with *tarbiyyah nafsyyah* (spiritual training) in terms of *`aqidah*, *`ibadah*, and *akhlaq* during Makkan period and part of Medinan period, the potential to continue to become alcoholic had changed to potential to abstain from alcohols.

Psychodynamic and humanistic perspectives

According to Badri (1976), one of the reasons that alcohol became rampant in ancient Arab society was the deep-rooted unconscious feelings of pride, insecurity, and romantic passion; which would be of interest to modern psychodynamic theories. But the coming of Islam has instilled the sense of pride for the true *`aqidah*, sense of security by Allah's power, and love and passion for Allah (SWT). These psychodynamic variables, influenced by Islam, had provided the potential for the Companions to change any bad behaviour in future, which was heavy drinking.

From an humanistic perspective, individual differences also influence whether the Companions would be involved in alcoholism or not, before or after

converting to Islam. For example, Badri (1976) mentioned that Uthman ibn al-`Affan never touched alcohol even during pre-Islamic period despite having the physiological and psychodynamic potential to do so. Even after converting to Islam, not all people had the sensitivity that alcohols were bad. Badri (1976) mentioned that `Umar ibn al-Khattab was already suspicious when the first verse that talked about alcohol was revealed (Qur'an 16: 67) that subtly differentiates between strong drink and good nourishment. Although the process of *tahrim khamr* (prohibition of alcohols) took a lengthy period and involved a number of stages, individual differences showed that some of the Companions had already been abstaining completely from alcohols from the very first stage, while other Companions delayed until the final stage of prohibition. But it is the *iman* in the souls of Companions that ultimately enabled them to show mass abstinence from alcohol at the final stage.

Social learning perspective

It is understandable if observational learning contributed to alcoholism for the Arabs. The children and teenagers might have been following their fathers' habit. The adults, on the other hands, might have been following the habits of some significant or influential others. In fact, heavy drinking had become an Arab culture, models were everywhere for any new potential non-alcoholic to become one. But when the Prophet (SAW) migrated to Medina, he had first and foremost created brotherhood (*ukhuwwah*) tied with the divine *`aqidah* so they become united and cohesive. This unity and cohesiveness had facilitated the compliance of the Companions to follow other fellow Companions who had been abstaining from alcohols. And of course, the Prophet (SAW) and a few Companions who had never touched alcohols and the Companions who had abstained from alcohol in the early stage of prohibition had provided a model that increased the number of followers or at least provided potential for future abstinence. And this social learning was based on *iman*, the belief that the Prophet (SAW) was the true model and the pleasure of following their brothers whom they loved for the sake of Allah.

Behaviourism

The stages of prohibition of alcohol had some striking similarities with modern behaviour therapy called systematic desensitisation (Badri, 1976) but in a larger scale. The prohibition involved four stages (Badri, 1976): firstly, subtly making no association between strong drink and good nourishment (Qur'an, 16: 67); secondly, directly but cautiously associating alcohol with greater sin compared to

their usefulness without prohibiting it (Qur'an, 2: 219); thirdly, restricting alcoholic drinking by not associating it with the most important divine practice i.e. *salat* (prayer) forcing them to abstain from alcohol at five different times in a day (Qur'an, 4: 43); and finally, direct prohibition and associating alcohols with filthy things and devils (Qur'an, 5: 90-91). These associations are what modern psychology refers to as classical conditioning. The very concepts of rewards and punishments that were well-known even during Makkan period might also have influenced the behavioural change in a gradual manner which has striking similarity with shaping techniques introduced by operant conditioning theory. At each of this prohibition stage, and while Prophet Muhammad's (SAW) education on *`aqidah*, *`ibadah*, and *akhlaq* continued, some of the Companions might have totally abstained from alcohols, some of them might have reduced themselves to social drinking only, some of them might have felt guilt, and some of them just getting ready for the next stage to stop drinking. In other words, an effective combination of classical and operant conditioning principles might have contributed to mass abstinence of alcohols. In addition to cognitive factors that ibn Sina and al-Ghazali had mentioned, the soul factor also played an important role in all the behavioural changes.

Cognitive-spiritual perspective

`Umar al-Khattab is one of those Companions who were gifted with inspirations as mentioned before. It is this `Umar who had been very suspicious about the evil nature of alcohol even during the first stage of its prohibition. And it is this very `Umar who, after the third stage, met Prophet Muhammad (SAW) to ask Allah (SWT) to give a clear statement about the status of alcohols in Islam. And as mentioned by Badri (1976), some of the Companions already knew that alcohol is bad and somewhat just waiting for the time of clear prohibition before they stopped drinking. This can be explained by another type of modern cognitive theory of learning called latent learning (Klein, 2002; Walker, 1996).

Religious perspective

This perspective postulates, in a general sense, that a Muslim should enjoy the *wajib* (obligatory), *mandub* (desirable) and *halal* (permissible) behaviours and avoid the *haram* (forbidden) and *makruh* (undesirable) behaviours. When the Qur'an stated clearly that alcohol is forbidden (Qur'an, 5: 90-91), a mass behavioural changes took place. Badri (1976) described the situation by reporting that Muslims in Medina "threw away the remaining drinks in their cups and broke

the large baked clay pots in which other drinks were being fermented” (Badri, 1976: 3). Some of them, after hearing the call ‘Surely alcohol has been forbidden’ broke and emptied the “large clay pots and skins full of fermented date-palm, honey, and grape till the streets of Medina ran with little rivers of *al-khamr* (alcohol) as a testimony to the greatest anti-alcoholism movement that humanity has ever witnessed” (Badri, 1976: 4). Naturally, as Muslims the *shari`ah* rulings such as *haram* should be powerful enough as a variable to change their behaviours. Actually, as we can see from contemporary Muslims’ behaviour, this variable is moderated by the soul and its level of *iman*.

According to Badri (1976), the real reason for the success is that these behavioural changes started many years before the prohibition of alcohol, specifically since the inception of Islam. During the early stage of Islam, instead of attacking alcoholism, Islam first attacked the false *`aqidah* (belief), ignorance, and values that were based on that belief (Badri, 1979). It is this ignorance that had become the roots of all evil behaviour. That is why the first thirteen years of prophethood was spent focusing on establishing the new belief emphasising on faith to the oneness of Allah, the unseen angels, the hereafter (including paradise and hellfire), the revealed books, and various prophets. Changing the souls of the Companions had changed them as persons in terms of mental processes (*`aqidah*) and behaviour (*`ibadah and akhlaq*). The classical conditioning, operant conditioning, or observational learning that came years later were only symptomatic treatment that witnessed this unbelievably mass-scale of behavioural changes made easier by the change of the souls years before. Treating symptoms of observable behaviour only without looking at the deep-rooted cause would not have caused a massive behavioural change.

The above application shows the importance of educating current young Muslims, new Muslims, or Muslims who have just realised the importance of going back to their root in Islam in terms of correct interpretation of *`aqidah*, *`ibadah*, and *akhlaq* first, so that all behavioural intervention programmes either in the form behaviour therapy, behaviour modification, or even modelling will be more effective and successful.

Conclusion

The proposed Islamic model of learning and its application are based on an ideal illustration of learned behaviour. However, if Muslims let themselves to be influenced by the reality, they may drift because reality changes. It is far better to

strive for the ideal so that it can *change* the reality, just like Prophet Muhammad (SAW) had successfully changed the habit of the Companions on alcoholism and created an ideal Islamic generation the human has ever known.

Studying basic psychological principles such as learning can help increase knowledge and *iman* and fulfil a believer's role as a servant (*`abid*) of Allah (SWT) by understanding human behaviour and mental processes. In this case, understanding human learning processes may assist in appreciating the beauty and complexity of human being of Allah's creation when he/she involved in learning processes. Applying basic psychological principles, on the other hand, can help Muslims fulfil their role as a vicegerent (*khalifah*) by performing *da`wah* or *tarbiyyah* to solve human problems by controlling human behaviour and mental processes. In this case, applying Islamic oriented learning model can help change the behaviours of the *ummah* and mankind towards the betterment. Indeed, studying and applying psychology of learning as a Muslim is a religious experience and will be receiving, God-willing, immense rewards from Allah (SWT).

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