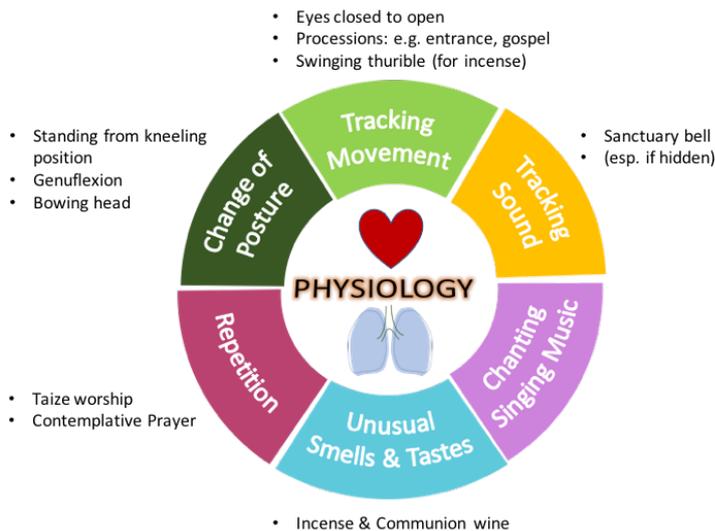


SCIENCE FOR WORSHIP

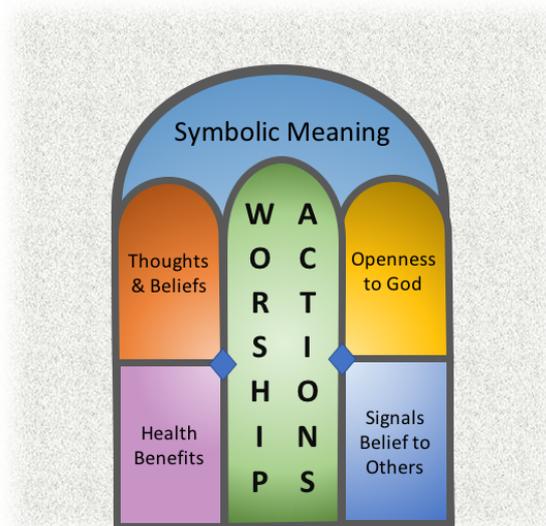
A Fresh Explanation of Church

Religious services are rich and full of beauty for some, yet to others they can often seem strange and obscure. But churches are not museums for the preservation of ancient rituals. The words and actions performed during worship are the way a faith community expresses their conviction that we are all invited into a fuller, freer life through a renewed relationship with God. There is a new way to explain what happens when we worship and it comes from an unlikely source – science, not pure science but science blended with Christian thinking. Scientific knowledge can be looked at afresh while allowing for the existence of God. This may not be such an odd idea. The natural world which science tells us about is important to Christians. The Bible describes how the natural world takes part in worship (e.g. Psalm 146 & Revelation 4) and items from the natural world play a central role in some forms of worship: water in Baptism, bread and wine in the Eucharist. The natural world also includes our physical bodies.



The congregation at a church service are not an audience watching a performance. We take part in the worship by adopting certain postures and movements such as kneeling and bowing our heads (see figure above). These worship actions are often performed in unison which requires us to watch others and be observed ourselves, so that the movements are aligned. But the bodily postures and actions performed during worship are not arbitrary customs adopted only for their symbolic meaning.

Worship actions also affect the way our bodies work, altering physiological process such as blood pressure, heart rate and breathing. In turn, these processes influence our emotions, thoughts and decision making. The presence of other worshippers and even the church architecture with its tall columns and vertical lines, can strengthen these effects. The stained-glass window below summarises the ways in which these biological responses brought about by worship actions can bring about a range



Thoughts & Beliefs

Religious beliefs can be abstract and difficult to grasp. Linking religious ideas to the physiological effects of specific gestures and body positions can make abstract concepts seem more real and easier to understand. Concepts that are tied to actions are also easier to remember because people are better at retaining ideas that are expressed in multiple ways.

Worship actions also support belief. Science has shown a link between our bodies and our beliefs by studying certain medical conditions which cause sufferers to deny the existence of something, perhaps a loved one or even their own bodies. Research has shown that these disorders result from a breakdown in the physiological responses that would normally be triggered by the loved one. In a similar way, reduced physiological responses in the presence of God could contribute to a failure to recognise his existence. These physiological responses to God are not in conflict with more rational and reasoned approaches to faith, rather belief arises when physiology and reason work together.

Health Benefits

Scientific studies have shown that regular attendance at church is linked to better physical and mental health. Physical activities that form part of worship contribute to this outcome. For example, the controlled breathing needed for singing or speaking in groups can lead to reductions in blood pressure. Postures and movements can also affect thoughts and emotions in ways that boost mental health

Openness to God

Have you ever watched a large flock of birds in flight all change direction together? The constantly changing patterns formed by the bird's sudden swooping can be mesmerising. It is an event which you could not predict from watching a single bird on its own. This type of joint behaviour is known within science as Emergence. Mathematical models can replicate emergent behaviours like those shown by a flock of birds. These models consist of a set of linked components that follow simple laws within a given setting. And, like flocks of birds, they generate new patterns of behaviour which would not be expected from the rules alone. The whole is more than the sum of its parts.

What has this to do with going to church? Through prayer and other worship actions, a church service can create the conditions for the development of emergent behaviours. The congregation represents a group of linked "components" that follow simple laws within a given setting. The function of the emergent behaviour is determined by the setting, in this case the presence of God. The science of emergence suggests that unexpected God-oriented events are more likely to happen when a faith community meets together.

Signalling Belief to Others

Scientific studies have shown that people are more likely to believe in God if they witness behaviours which signal to others a genuine belief. Put another way, actions speak louder than words. And public worship is a key opportunity for faith communities to demonstrate commitment to God. Scientific studies have identified a lack of exposure to religious actions as a factor that contributes to religious disbelief, especially in societies where people feel that their survival and well-being are not threatened. The more secure the society, the greater the need for religious rituals which can communicate a genuine commitment to God.

All are Welcome

If science and faith are in conflict, as commonly portrayed by the media, then the idea that science can enrich worship may come as a surprise. In truth, the patterns and symmetries of the natural world revealed by science are signposts leading to the Creator God. Rather than be a block to attending church, an appreciation of science can be a reason for worshipping God.