

# Selecting for Celibacy

Cultural evolution and the puzzling case of Buddhist celibacy

By Caitlin Dalzell

A thesis

submitted to Victoria University of Wellington  
in fulfilment of the requirements for the degree of  
Master of Arts  
in Religious Studies

Victoria University of Wellington

2011

## **Abstract**

Buddhist celibacy provides an example of religious behaviour which appears puzzling from the vantage point of genetic selection, but whose maintenance can be partially explained because of the dynamics of cultural selection. In this thesis, I examine how and why celibacy is maintained and perpetuated within Buddhism and how this relates to the explanations cultural selection offers for costs within groups. I argue that celibacy is adaptive because it divides Buddhist communities into two parts, stimulating innate tendencies towards in-group cooperation without the need for an outside group. Because Buddhist celibates are also materially non-productive their presence necessitates increased cooperative behaviours in lay communities. I argue that the endurance of the parts of Buddhist traditions which are necessary to maintaining celibate practise provides evidence that cultural selection has shaped the tradition to perpetuate and reinforce celibacy, a behaviour which is adaptive because it promotes cooperative behaviours within a divided cultural group. Celibacy increases the cultural fitness of Buddhist communities.

## Acknowledgements

Joseph Bulbulia and Michael Radich  
provided inspiration, support and guidance throughout  
the research and production of this thesis.

My husband Alex  
provided constant faith and endless patience.

## Contents

Introduction.....	5
Theory: Evolution, culture, and religion.....	10
Evolution is substrate neutral .....	11
Cultural selection .....	14
Selection for religion .....	22
Summary.....	43
Methodology: Testing evolutionary hypotheses about religion .....	46
Case Study: Buddhist Celibacy .....	55
Defining ‘the group’ within Buddhist communities.....	56
The costs of supporting the Saṅgha .....	60
The benefits of supporting the Saṅgha .....	65
How celibacy is maintained .....	77
The Teaching .....	80
The Discipline .....	129
Conclusion .....	149
Bibliography.....	151

## Introduction

From the Dalai Lama to the Buddha himself, Buddhism is dominated by the figure of the *bhikkhu*, the celibate monk. Despite the diversity of Buddhist traditions, celibate monasticism is found throughout the Buddhist world, making it a very strong candidate for the status of an essential, basic and enduring feature of the religion. But celibacy poses an evolutionary puzzle: why has a behaviour which entails such a large genetic sacrifice endured across many hundreds of generations and in many different socio-cultural environments?

Evolutionary theory offers several explanations for the existence of religions and their inherent costs. Cultural selection, in particular, gives a convincing account of why costly behaviours such as celibacy can endure within religions. In this thesis, I look at ways that cultural selection explains costs within groups, through an examination of how and why celibacy is maintained and perpetuated in the Buddhist context. I argue that celibacy is adaptive because it divides Buddhist communities into two parts, stimulating innate tendencies towards in-group cooperation without the need for an outside group. Because Buddhist celibates are also materially non-productive, their presence necessitates increased cooperative behaviours in lay communities. Celibacy, though, does not happen of its own accord - there are many parts of the Buddhist tradition which are necessary to keeping celibate practise alive. I argue that the pervasiveness of these features within the tradition provide evidence that cultural selection has shaped the tradition to perpetuate and reinforce celibacy, a behaviour which is adaptive for Buddhist groups because

it increases their cultural fitness.<sup>1</sup>

In the first chapter, I introduce basic evolutionary theory, discussing natural selection generally and cultural selection specifically. I lay out the ways that selection can act on culture, and how it can therefore lead to the retention and elaboration of religion. Culture can confer an adaptive advantage for the genetic well-being of an individual, for the culture an individual carries with them and transmits, or for the genetic or cultural group to which an individual belongs. In each instance the adaptive function accumulated through selection will be markedly different, as it is retained for different ends.<sup>2</sup> I discuss features of religious cultures which fulfil these expectations. This consideration of how culture can confer adaptive advantage and what accumulated adaptive function within a religion might look like, clarifies why I proceed to argue that Cultural Group Selection (CGS) is the best explanation for retention of celibacy within Buddhist contexts. Throughout the case study, which comprises the third chapter of this thesis, I return to elaborate this basic discussion of evolutionary theory where necessary to further my argument that Buddhist celibacy is uniquely beneficial for Buddhist groups.

The second chapter of this thesis describes a methodology for identifying the marks of selection within religions. The evolutionary approaches to religion put forward by David Sloan Wilson, Peter Richerson and Robert Boyd, amongst others, provide the basis for my methodology. I briefly discuss the way that these theorists have applied the concepts of evolution to the study of religions, before describing how their work informs my case study. If a tradition is

---

<sup>1</sup> I define cultural fitness in the next chapter.

<sup>2</sup> Elliott Sober and David Sloan Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour* (Cambridge: Harvard University Press, 1998). Chapter 3.

shaped in such a way that it routinely causes adaptive behaviours predicted by the selection theories being considered, then there is some evidence that selection has played a hand in its generation and retention.

In the third chapter, I apply this method to Buddhist celibacy. CGS proposes that selection on a cultural group can outweigh selection on an individual within that group, and can thus lead to the continuation of individually costly behaviours if those behaviours benefit the group. In the first part of my case study, I explain how celibacy benefits Buddhist groups which support it. Specifically, I argue that celibacy delineates Buddhist cultural groups into two mutually reliant parts. This division is beneficial because it can trigger impulses for within group cooperation, enhancing cooperation within both sub-groups, and therefore increasing cooperation across the wider group subject to selection. A group divided in this way could be more cooperative than a comparably sized group without internal division. I also argue that the non-productivity of *bhikkhu* demands that the laity cooperate to support them. Buddhist celibacy results in cooperative behaviour because it creates conditions in which cooperation is necessary as well as triggering innate impulses towards cooperative behaviour. These benefits make celibacy behaviour likely to be retained through CGS, and justify describing it as adaptive.

Having shown why I argue that celibacy is adaptive, I then turn to address how celibacy is retained. That is, I discuss the many ways in which Buddhism maintains and perpetuates celibate behaviours. First, I argue that basic Buddhist doctrine is shaped to take advantage of common psychological biases about who we receive information from. By utilising biases, Buddhism is likely

to spread further than it might otherwise, therefore increasing the base of support for celibacy. It is important that the basic doctrinal positions of Buddhism be regarded by many as trustworthy because it makes it more likely that people will accept the description of reality found within them. That description challenges assessments about the costs and benefits of actions which individuals might make on the basis of reality alone. The four noble truths, the doctrines of *kamma* and ideas surrounding the concept of merit all contribute to the construction of an alternate understanding of reality, where the attendant consequences of action extend beyond what can be perceived by the senses alone. Support of *bhikkhu* is presented as bringing many benefits, while action which harms *bhikkhu* is thought to have deleterious consequences which extend beyond this life. This double pronged approach promotes lay cooperation, both in the form of material goods to support *bhikkhu* and also in the form of new recruits. Basic Buddhist doctrine furnishes Buddhist communities with the intrinsic motivation to maintain celibacy.

Cooperation is further motivated by the extrinsic discipline which exists within groups of *bhikkhu*. In the final section of my case study, I explore how shared codes of conduct and discipline reinforce celibacy and construct the Saṅgha. The specific requirements of the discipline amongst *bhikkhu* both permanently separates the *bhikkhu* from the laity, and bind them to the laity by rendering the *bhikkhu* dependant. It also protects the cooperation between the laity and the *bhikkhu* through a constraint of *bhikkhu* behaviour. I further argue that the rules that *bhikkhu* commit to also contain the means to perpetuate themselves, and therefore to safeguard the benefits that result for Buddhist communities. The emphasis put on the careful transmission of the Saṅgha's internal discipline ensures that it is replicated accurately.



The solution to the evolutionary riddle of celibacy may be found in the benefits celibacy brings to the challenging task of maintaining cooperative behaviours in large social groups. The benefits that division within a cultural group bring explain how selection allows celibacy to be retained. Many features of Buddhist traditions suggest adaptive design for the promotion and maintenance of cooperative behaviours within a divided cultural group. In the conclusion of this thesis, I suggest that the adaptive benefits of celibacy may not be limited to Buddhism but could also account for the occurrence of celibacy in other traditions. If this is so, processes reminiscent of convergent evolution occur within religions as well. Consideration of celibacy as a product of evolutionary process demonstrates that the study of religion can enrich extant evolutionary theory in unexpected ways.

## Theory: Evolution, culture, and religion

While the capacity of natural selection to explain the emergence of design within genes is commonly accepted, the capacity of natural selection to explain the emergence of design within culture remains controversial. This thesis though, is premised on the hypothesis that culture results from, and is subject to, natural selection. Here, I justify that premise. The basic principles of natural selection can operate on both genes and cultures. I briefly examine both genetic and cultural selection because both can help to explain otherwise anomalous aspects of the conservation and transmission of religious culture. The natural selection of culture accounts for both the diversity and the similarity in human cultural traditions generally, and religious traditions more specifically. I introduce important points of theory upon which an examination of celibacy within the Buddhist context can be hung. Throughout the rest of the thesis, I elaborate these points of theory, in order to show how they explain the retention of celibacy within the Buddhist context.

It is necessary to preface this discussion by stating that I take it for granted that not every cultural fact can be explained by appeal to cultural selection. Moreover, cultural evolution involves processes besides cultural selection, (such as drift).<sup>3</sup> Cultural selection can explain genetically damaging behaviours, and I will apply those explanations to this particular case without speculating further about the scope of this sort of explanation to every cultural domain.

---

<sup>3</sup> David Sloan Wilson, "Evolution and Religion: The Transformation of the Obvious," in *The Evolution of Religion: Studies, Theories, and Critiques*, ed. Joseph Bulbulia, et al. (Santa Margarita: The Collins Foundation Press, 2008).

## ***Evolution is substrate neutral***

Evolution was most famously identified and defined by Charles Darwin. Darwin described natural selection as a process which could explain heritable traits.<sup>4</sup> Selection, as Darwin identified, is a step-wise process that leads to the gradual accumulation of functional design – one improvement paves the way for another, which leads to another, and so on. So ‘selection’ refers to the differentiated success of one phenotype<sup>5</sup> over another, such that the successful phenotypic variations are proportionally more prevalent in subsequent generations,<sup>6</sup> and thus can be said to be ‘selected for’. The factors that build distinct phenotypes can replicate. The process of differential survival of phenotypes is referred to as ‘competition’.<sup>7</sup> Different rates of success are

---

<sup>4</sup> Throughout the *Descent of Man*, Darwin embraces the idea that natural selection acts not only at the level of the individual, but also at the level of a group of individuals. “The moral sense follows, firstly, from the enduring and ever-present nature of the social instincts; secondly, from man's appreciation of the approbation and disapprobation of his fellows ... the first foundation or origin of the moral sense lies in the social instincts, including sympathy; and these instincts no doubt were primarily gained, as in the case of the lower animals, through natural selection...” Charles Darwin, *The Descent of Man and Selection in Relation to Sex* (London: John Murray, Albemarle Street, 1906). 931 – 937.

<sup>5</sup> Phenotype includes both the genotype of an individual organism and environmental influences which cause the organism to differ from other individuals in the population around it. Random mutations in an organism’s genotype can manifest in their phenotype. Culture is also a major influence in determining many aspects of human phenotypes.

<sup>6</sup> Or as Griffiths and Sterelny observe: “...the process by which some traits come to predominate in a population, by virtue of superior fitness, while others decline in frequency.” Kim Sterelny and Paul Griffiths, *Sex and Death: An Introduction to Philosophy and Biology* (London: University of Chicago Press, 1999). 388.

<sup>7</sup> Competition does not rely on physical struggle, and it is not synonymous with violent conflict or warfare. David Sloan Wilson, "Testing Major Evolutionary Hypotheses About Religion with a Random Sample," *Human Nature* 16, no. 4 (2004). 435. If there are two plants growing in an environment which is becoming increasingly saline, and while one plant manages to survive the other dies, the two can be said to be in competition. Indeed, it does not need to be a contest of absolute fitness. If the haploid plant is capable of producing ten viable seedlings into the nearby environment, while the other plant produces only one, then the plant which

(Note continues over page)

referred to as 'fitness'.<sup>8</sup> When competition leads to the retention of variation, that variation provides a platform for future functional variation.

For selection (and therefore evolution) to occur there has to be variation between traits, that variation has to lead to differences in the success of those possessing it compared to those that do not, and the variation has to be inheritable so that proportionally more of the subsequent generation possess the variation. If these three conditions are satisfied, then selection can lead to the accumulation of functional design within individual phenotypes.<sup>9</sup> The conservation and elaboration of both genetic and cultural factors that build human traits can be explained in part by these processes.<sup>10</sup>

When copies are made with variation, and some variations are in some tiny way "better" (just better enough so that more copies of *them* get made in the new batch), this will lead inexorably to the ratcheting process of design improvement Darwin called evolution by natural selection.<sup>11</sup>

Variation, competition and inheritance are the basic requirements for selection

---

reproduces more successfully can be said to be fitter, as its relative fitness is greater than that of the other plant, and they are still said to be competing.

<sup>8</sup> Sterelny and Griffiths, *Sex and Death: An Introduction to Philosophy and Biology*. 384; Richard Dawkins, "Darwin and Darwinism," *Encarta MSN* (1998).

<sup>9</sup> Henry Plotkin, *The Imagined World Made Real*. (London: Penguin Books, 2003). 132

<sup>10</sup> Traditionally, traits were held to result from the genotype of an organism. Phenotypic features not dictated by the genotype were not discussed as traits. Andrews et. al. extend the term to include behavioural and psychological phenomena. Although they "are not traits in and of themselves because they are not constructed from genes and their products" they are like traits because they produce effects, and can be referred to as traits with the proviso that what is really being referred to is the "underlying decision rules and information processing algorithms." Paul W. Andrews, Gangestad, Steven W. ,Matthews Dan "Adaptationism - How to Carry out an Exaptationist Program," *Behavioural and Brain Sciences* 25, no. 489 - 553 (2002). 491. I refer to such things as "traits", while staying neutral on the exact causal process which leads to them.

<sup>11</sup> Daniel C. Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* (New York: Penguin Group, 2006). 79

to occur, and it is accepted that genetic information regularly meets these three requirements. Genetic information differs between individuals, some of those differences result in fitness differences, and those fitness differences are often transmitted, providing the environment remains stable enough between generations that the advantage is also inherited. Yet genes are not the only medium that meets these conditions and selection can also lead to the accumulation of function outside of the genome.<sup>12</sup> The conditions necessary for natural selection are not limited to a specific medium.<sup>13</sup> Evolution is, in the words of Daniel Dennet, ‘substrate neutral’.<sup>14</sup>

Darwin argued that social behaviours displayed within human groups looked just as likely as physiological characteristics to be subject to the processes of selection he had identified.<sup>15</sup> Though the identification of genes (and the

---

<sup>12</sup> Ibid. 79. In this thesis, I focus on culture as a non-genetic medium for selection. It is not the only such medium. Epigenetic (or non-genetic) inheritance systems have been shown to function at a cellular level in some situations. Eva Jablonka and Marion J. Lamb, *Epigenetic Inheritance and Evolution: The Lamarckian Dimension* (New York: Oxford University Press, 1995). An epigenetic inheritance system is not subject to the same principles that apply to genetic transmission. That is, unlike genes which cannot respond to environmental change except through selection on random mutations within the genome, these systems respond to change and transmit the changes vertically to their offspring. They are systems of response and transmission. Cultural information is also a system of both transmission and response. The rigid distinctions which have been drawn between replicators and vehicles do not necessarily apply neatly to culture. Marion Lamb Eva Jablonka, *Evolution in Four Dimensions* (Cambridge: The MIT Press, 2005). 374 - 375. For a discussion of these issues, see Joseph Henrich, Robert Boyd, and Peter J. Richerson, "Five Misunderstandings About Cultural Evolution," *Human Nature* 19(2008). 124 - 126

<sup>13</sup> Or, as I turn to explore shortly, a specific level within that medium. Samir Okasha, "Chapter 8. The Units and Levels of Selection," in *A Companion to the Philosophy of Biology*, ed. Sahotra Sarkar and Anya Plutynski (Blackwell, 2008).

<sup>14</sup> As Dennet put it “It has long been clear that in principle the process of natural selection is *substrate-neutral* – evolution will occur whenever and wherever three conditions are met: 1. replication, 2. variation (mutation), 3. differential fitness (competition).” Daniel C. Dennett, *Darwin's Dangerous Idea* (New York: Simon and Schuster, 1995). 341.

<sup>15</sup> "Cultural Evolution," in *Stanford University Encyclopaedia of Philosophy* (Stanford University, 2010)., For an example of a discussion within which Darwin discusses the descent of culture- (Note continues over page)

demonstration of their efficacy at fuelling evolutionary change across generational time) vindicated Darwin's theories, the emphasis on genes as units of inheritance did not necessarily prove that Darwin's observations about social behaviour were therefore less valid. Genes are not the only type of information that affects social behaviours, and they are not the only inherited information that can be subject to selection

## ***Cultural selection***

The similarities between cultural and genetic selection exist because culture is, like genes, comprised of information. In this section, I define culture and claim that cultural information, like genetic information, often satisfies the three fundamental conditions for evolution by natural selection. However, the way cultural selection acts differs to the way genetic selection acts,<sup>16</sup> as I turn to explain. Religion is a special type of culture, and therefore also subject to selection in ways similar to but differ from genetic selection. I end this section by focusing on three key ways selection can act on culture. Each leads to different explanations for the maintenance and conservation of genetically detrimental behaviour (such as celibacy) within religions.

'Culture' is information, including beliefs, values and morals, that influence behaviour and that are shared by individuals within a group, which can be defined on the basis of that shared knowledge.<sup>17</sup> That information is made of

---

specific morality, amongst other cultural features, see Darwin, *The Descent of Man and Selection in Relation to Sex*. Chapter 5. He also discusses language as subject to selection and change.

<sup>16</sup> Henrich, Boyd, and Richerson, "Five Misunderstandings About Cultural Evolution."

<sup>17</sup> I follow Ward Goodenough, who offers this definition: "A culture consists of the criteria or guidelines for speaking, doing, interpreting, and evaluating that people who live and work (Note continues over page)

representations of patterns.

Patterns are abstract idealisations of information in the world. Cultural transmission relies on forming a pattern representation in one mind that is a replicate of a pattern representation in another mind on the basis of information passed through a public representation.<sup>18</sup>

We are adapted to perceive patterns of information in our environment and behave accordingly, allowing us to change our behavior quickly in response to a change in environment.<sup>19</sup> The capacity to perceive patterns in our environment confers adaptive advantage as well as flexibility: likely future occurrences can be predicted and individual actions altered accordingly,<sup>20</sup> without having to rely only on individual experiential learning. Information

---

together have acquired in the course of interacting with one another in the conduct of recurring activities and that they have thus learned to attribute to one another.” Ward H. Goodenough, "Outline of a Framework for a Cultural Evolution Theory," *Cross Cultural Research* 33, no. 1 (1999). 86. I also draw on definitions’ offered in Plotkin, *The Imagined World Made Real*. 214, and Robert Boyd and Peter J. Richerson, *Culture and the Evolutionary Process* (Chicago and London: The University of Chicago Press, 1985). 2. The Geetzerian elements of these definitions bring us closer to definitions accepted outside of evolutionary theory. Some evolutionary theorists, such as Scott Atran, have asserted that cultures do not exist in and of themselves. Instead, culture is a description of a set of cognitively predetermined and socially mediated behaviors. See Scott Atran, “The Trouble with Memes : Inference Versus Imitation in Cultural Creation,” *Human Nature* 12, no. 4 (2001). Or Scott Atran, “The Cultural Mind: Environmental Decision Making and Cultural Modeling within and across Populations,” *Psychological Review* 112, no. 4 (2005). I do not share this commitment to individualistic understandings of group phenomena.

<sup>18</sup> Matt Gers, "Human Culture and Cognition" (Victoria University, 2008). 139.

<sup>19</sup> While Gers addresses this directly, (Ibid. 132 – 152), many others discuss our capacity to learn, and to transmit representations of learned information. See Robert Boyd and Peter Richerson, "Cultural Adaptation and Innateness," in *The Innate Mind: Culture and Cognition*, ed. Peter Carruthers, Stephen Stich, and Stephen Laurence (USA: Oxford University Press, 2006). 18 – 19.

<sup>20</sup> The predisposition towards identifying patterns within our environments can also be a disadvantage. As Sterelny describes: “Nonetheless, there surely are important and developmentally entrenched features of the human mind that constrain the type of information that flows accurately between the generations. For example, we do not seem well-engineered for good statistical inference, for we are far too apt to see pseudo-patterns.” Kim Sterelny, "The Evolution and Evolvability of Culture," in *Twenty Five Years of Spandrels*, ed. Dennis Walsh (Oxford: Oxford University Press, 2003). 31.

can be represented by one individual, and received by another.<sup>21</sup> Defining culture as information which represents patterns allows me to sidestep issues around units of culture, though I return to these questions throughout this section, first as I discuss how cultural selection differs from genetic selection, and then as I consider memetic theories of selection.<sup>22</sup> As long as enough information is shared amongst a group (delineated by possession of that information), that group can be said to share the same culture.

‘Religion’ is cultural information relating to supernatural beliefs which alters behaviours of those who are committed to it.<sup>23</sup> An individual capacity for belief in the supernatural can exist without religion (as evidenced by the plethora of non-religion specific supernatural beliefs found in the post-industrial secular world) but religions cannot exist without supernatural belief.<sup>24</sup> Supernatural can be understood as anything which does not exist within the natural world,

---

<sup>21</sup> Gers, "Human Culture and Cognition".

<sup>22</sup> Cultural information is pleiotropic, that is, it influences other nearby information. Identifying cultural information as discrete entities ignores the weft and warp which form cultures. The issue of discretion and containment of cultural variants informs much of the discussion around cultural evolution generally, and memetics specifically, and it is one which will recur throughout this consideration of cultural evolution.

<sup>23</sup> Joseph Bulbulia, "Nature's Medicine: Religiosity as an Adaptation for Health and Cooperation," in *Where God and Science Meet: How Brain and Evolutionary Studies Alter Our Understanding of Religion*, ed. Patrick MacNamara (USA: Praeger Publishers, 2006); ———, "Meme Infection or Religious Niche Construction? An Adaptationist Alternative to the Cultural Maladaptationist Hypothesis," *Method and Theory in the Study of Religion* 20(2008). By this definition, I am claiming that religions exist as types of social phenomena, and are not just, in the words of Dan Sperber a "range of related anthropological issues". Scott Atran and Ara Norenzayan, "Religion's Evolutionary Landscape: Counterintuition, Commitment, Compassion, Communion," *Behavioural and Brain Sciences* 27(2004). 751.

<sup>24</sup> Though Buddhism is understood by some believers not to contain supernatural beliefs, I define it here as a religion since it proposes an understanding of reality beyond that perceivable by the senses alone. Further, many of the rituals and practices associated Buddhism are designed to manipulate supernatural powers within the world. In particular, lay understandings of *kamma*, rebirth and merit contribute to my identification of Buddhism as a religion.



as it is recognised from within a paradigm of contemporary science.<sup>25</sup> As I turn to discuss cultural selection, it is with awareness that the points I make apply equally to religion, as it is a particular type of cultural information.

Both genetic and cultural selection require that there is variation that replicates and competes within populations. While culture must be shared by at least two individuals, and while it is found universally across human populations, the way culture affects behaviours varies between individuals. Further, though there is a tendency towards homogenisation of culture within cultural groups,<sup>26</sup> there are often multiple cultural groups within a population. Though culture is shared within groups, it can vary widely between individuals.

The causes of cultural variation differ from those of genetic variation, and can occur at timescales which vary radically from genetic timescales. Culture meets the variation criteria necessary for selection to occur, but because of its mode of transmission it varies more, and more quickly than genes.<sup>27</sup> Individuals can receive new pieces of culture throughout their lives, unlike the genetic information they possess. Though it is misleading to present all genetic traits as fixed (since the performance of many traits depends on environmental interactions), the difference in transmission mode between genetic and cultural traits means that cultural traits can be more flexible than genetic ones.

---

<sup>25</sup> Of course, from within other paradigms, what I conceive of as supernatural may be firmly and demonstrably located within the natural world.

<sup>26</sup> Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. 144 - 151; Kim Sterelny, "Memes Revisited," *The British Journal for the Philosophy of Science* 57, no. 1 (2006). 151 - 152.

<sup>27</sup> For a discussion of the relative speed of genetic and culture evolution and their possible effects on each other, see Peter J. Richerson, Robert Boyd, and Joseph Henrich, "Gene-Culture Coevolution in the Age of Genomics," *Proceedings of the National Academy of Sciences* 107 no. 2 (2010). Also Dennett, *Darwin's Dangerous Idea*. 338 - 339.

Unlike genes, which are limited to sexual transmission, cultural transmission can occur through a much wider array of mediums, and is often promoted and supported in a variety of ways.<sup>28</sup> This becomes clear throughout the case study as I explore the variety of ways which celibacy is supported and transmitted within Buddhist traditions.

Culture is inherited, but it is inherited differently than genes. With genes, individuals receive a specific, fixed packet of information that dictates a combination of traits from both parents.<sup>29</sup> Though its expression can be subject to environmental conditions, it is inherited reliably and vertically (from parents to offspring). The genetic information of those individuals with the most viable offspring increases in frequency in subsequent generations. The inheritance of culture, however, is not necessarily vertical: it can also be inherited horizontally (from non-related peers) and diagonally (from other individuals within previous or subsequent generations). Because individuals can inherit culture from the social environment around them, cultural

---

<sup>28</sup> "There is no doubt that, as people acquire and modify beliefs, ideas, and values, the variation that is generated can be highly non-random, and these nonselective processes shape cultural variation. But so what? Selection occurs anytime there is heritable variation that affects survival or reproduction (transmission). It does not matter whether the variation is random. In cultural evolution, unlike genetic evolution, natural selection may compete with other important directional processes created by human psychology. In any given case, whether one or another force will predominate is an empirical issue." Henrich, Boyd, and Richerson, "Five Misunderstandings About Cultural Evolution." 129 – 130. Also Richerson, Boyd, and Henrich, "Gene-Culture Coevolution in the Age of Genomics." 8985.

<sup>29</sup> This is not to ignore the complications that can arise from selection acting on individual genes within one genomic package. "The genes that compose an organism's genome do not always have the same evolutionary fates: the selection of sex ratio distorters and other selfish genetic elements has consequences for organism phenotypes." Kim Sterelny, "Snafus: An Evolutionary Perspective," *Biological Theory* (2007). 11; citing Austin Burt and Robert Trivers, *Genes in Conflict: The Biology of Selfish Genetic Elements* (Cambridge: Harvard University Press, 2005). Such conflicts nicely illustrate the tension which different selection processes acting simultaneously can lead to. Tensions of this sort are also important in the cultural context.

inheritance is much more varied than genetic inheritance. Individuals affect culture in others, leading to novel possibilities for adaptive flexibility.

Variation in means of inheritance and transmission is also accompanied by variation in the fidelity with which culture is received.<sup>30</sup> For selection to act, advantageous cultural variations must be inherited with enough fidelity that the advantage survives the transmission and is expressed in the inheriting generation.<sup>31</sup> Culture is a term describing a diversity of types of information, which are received and interpreted in a multitude of ways by many different individuals at once.<sup>32</sup> When it comes to culture, we can be porous receptacles of variations expressed by those within our environments but we can also be nuanced selectors, displaying preferences about what cultural information we inherit and what we do not.<sup>33</sup> Some types of culture indelibly mark our cognitive patterns and cannot be changed,<sup>34</sup> while others will not be remembered the following day. Children exposed to speech acquire the language and communication patterns of those around them as well as a plethora of other culturally determined behaviour based on the behaviours of those around them.

---

<sup>30</sup> Henrich, Boyd, and Richerson, "Five Misunderstandings About Cultural Evolution." 124 – 126, Richerson, Boyd, and Henrich, "Gene-Culture Coevolution in the Age of Genomics."

<sup>31</sup> But individual transmission need not even be reliably accurate for a cultural trait to still spread across a population once it is possessed by a certain percentage of the population. Henrich, Boyd, and Richerson, "Five Misunderstandings About Cultural Evolution." 124 – 126. Also Sterelny, "The Evolution and Evolvability of Culture." and ———, "Snafus: An Evolutionary Perspective."

<sup>32</sup> Sterelny, "Memes Revisited."

<sup>33</sup> Boyd and Richerson discuss some likely universal preferences (which they refer to as 'biases') for who we accept information from. Peter J. Richerson and Robert Boyd, *Not by Genes Alone* (Chicago: University of Chicago Press, 2006). 64 – 76. I will return to these in later discussions of the spread of celibacy.

<sup>34</sup> Kim Sterelny, *Thought in a Hostile World* (Malden: Blackwell, 2003). 221 – 230

For some sorts of culture, inheritance is undeniably reliable. For other sorts of cultural behaviours, like skills learnt in adulthood or dress choice, inheritance is not necessarily so reliable. Still, cultural information of these sorts is also regularly transmitted with fidelity between individuals. Across a diversity of cultural information, that which is reliably transmitted can be subject to selection, regardless of its type.<sup>35</sup>

Further, even low fidelity cultural transmission can still be reliable enough for selection to act if there is repeated exposure to the information.<sup>36</sup> Unlike genetic information, exposure to cultural information can occur repetitively, and transmission can occur over time.<sup>37</sup> The array of ways in which culture can be inherited, and our predispositions to receiving some information over and above other, contributes to the likelihood that despite the low fidelity of some types of cultural transmission, cultural information can be retained and elaborated.<sup>38</sup>

Finally, culture must confer adaptive advantage in order to be visible to selection.<sup>39</sup> The capacity for culture is adaptive – being able to discern patterns within information in our environments and to transmit that information to others makes it possible for us to reduce the costs of learning. Further, much culturally acquired behaviour is obviously adaptive, and enhances the

---

<sup>35</sup> Sterelny, "The Evolution and Evolvability of Culture." 7 – 13.

<sup>36</sup> Joseph Heinrich and Robert Boyd, "On Modeling Cognition and Culture: Why Cultural Evolution Does Not Require Replication of Representations," *Cognition and Culture* 2, no. 2 (2002).

<sup>37</sup> Ibid.

<sup>38</sup> Sterelny, "Memes Revisited."; ———, "Snafus: An Evolutionary Perspective." 5 – 6, 13. This is not to assert that all cultural information is likely to be exposed to selection. Of course, there will be some sorts of information which are not subject to selection because they are not transmitted to other individuals successfully.

<sup>39</sup> Richerson and Boyd, *Not by Genes Alone*.

likelihood of survival and reproduction. In culture subject to selection, we should expect to see the gradual build up of adaptive function. In many ways, culture reflects precisely this. It provides information which allows us to alter behaviours and survive challenging environments and situations.<sup>40</sup> Culture can allow us to acquire information without the costs of discovering that information.<sup>41</sup>

However, just because our capacities for culture have evolved does not mean those capacities are guaranteed to only act in adaptive ways. People can perceive, remember and transmit information incorrectly, and such misinformation can persist for a range of different reasons.<sup>42</sup> Most interestingly here, selection can favour the transmission of cultural information because that information is well adapted for its own success, separate from ours. It is this idea that has been popularised in meme theory, which I will return to shortly. While culture can be subject to selection, the adaptiveness which makes culture visible to selection can occur at several different levels, creating a potential disjuncture between the genetic fitness of the individual possessing the culture, and the cultural information itself.<sup>43</sup> By considering the different

---

<sup>40</sup> Classically cited examples include peoples who survive in extremely challenging environments through accumulated and transmitted knowledge, such as the Inuit. Ibid. 44 – 48; Richerson, Boyd, and Henrich, "Gene-Culture Coevolution in the Age of Genomics." 8985; Sterelny, "Snafus: An Evolutionary Perspective."; ———, "Memes Revisited." However, we could equally cite any range of social technologies from contemporary life, which assist us to live comfortably in a diverse range of environments.

<sup>41</sup> It is this fact about culture which also makes it potentially a source of misinformation and maladaptation. Information from others cannot necessarily be trusted, nor is it necessarily beneficial, rendering what looks like a cheap information source potentially very costly. Sterelny, "The Evolution and Evolvability of Culture." 14 – 21.

<sup>42</sup> For a discussion of the occurrence of cultural misbelief, see D. C. Dennett and R. T. McKay, "The Evolution of Misbelief," *Behavioural Brain Sciences* 32, no. 6 (2009).

<sup>43</sup> Disjunctures between levels of selection do not just occur within cultural traditions. The fitness maximising features of genes can also be divorced from the best interests of the (Note continues over page)

ways culture can confer adaptiveness, and the different levels this adaptiveness can occur at, we can see how religious culture, even genetically detrimental religious culture, can be conserved through selection.

There are dangers inherent in judging the fitness of any trait merely by virtue of its survival in one particular environment. Celibacy, in the Buddhist context, is a behaviour which has endured across a wide range of socio-historical environments and across generational time, despite its cost.<sup>44</sup>

### **Selection for religion**

The fact that culture is inherently shared amongst a group is a key to many of its adaptive capacities.<sup>45</sup> But the features which make culture able to be shared

---

individual carrying them. Individual genes may behave in ways which endanger the whole genome, but further their own spread. Austin Burt and Robert Trivers, *Genes in Conflict* (Harvard: Harvard University Press, 2006). Genetically determined traits can also impel people to behave in ways which are good for the spread of their genes, though potentially detrimental for their own wellbeing, Geoffrey F. Miller, "Sexual Selection for Moral Virtues," *The Quarterly Review of Biology* 82, no. 2 (2007). p99 – 102. Though the fitness advantage may not lie with the individual carrying the culture, or carrying the gene, selection on variable, inheritable information (genetic or cultural) can occur as long as there is some reason that information is better at reproducing itself than other information within the environment.

<sup>44</sup> "How do we know whether a bit of a tune or a catch phrase is a fit meme? Often, it seems, only by asking whether the meme has successfully spread. This is dangerous territory. Used in this way, natural selection is a useless, or even misleading, tautology..." Henrich, Boyd, and Richerson, "Five Misunderstandings About Cultural Evolution." 127 – 129.

<sup>45</sup> Sterelny, in his 2006 paper "Memes Revisited", presents group-wide accumulation of functional culture as evidence of an evolutionary process in action. "Humans often succeed in making good decisions in informationally challenging environments. Often this capacity is culturally mediated: adaptive action depends on a multi-generational accumulation of knowledge and skill. We make good decisions in challenging environments because of the accumulation of cognitive capital by the groups in which we live. It is this accumulation that allows agents to make good decisions in the face of high information loads...No single individual makes a natural history data base or invents an optimal developmental environment for the acquisition of some complex skill. These multi-generation constructions are adaptive but undesigned, and hence to explain them, some form of a hidden-hand mechanism is necessary." Sterelny, "Memes Revisited." 150 – 151.

amongst a group (such as the ease with which culture can be communicated, transmitted and changed) also make it possible for culture to be individually maladaptive.<sup>46</sup> People can transmit any information amongst a group, regardless of its genetic or cultural adaptiveness.<sup>47</sup> This flexibility allows selection to operate at different loci within cultural information simultaneously.

Selection can act on information which is good at helping individuals survive and reproduce, or it can act on information which is good at spreading itself.<sup>48</sup> It can also act on cultural groups, or on individuals within those groups.<sup>49</sup> Subsequently, we are vulnerable to adopting cultural information that is good at being transmitted, rather than good for us. Though culture often does confer fitness advantages such that it is subject to selection, there is no guarantee that that fitness advantage will rest on the genetic interest of the individual conveying the culture. Individually maladaptive behaviour can result from selection on cultural information if that information is selected for reasons other than its individual genetic benefits.

Cultural evolution can have played the same shaping and pruning role as genetic evolution, yielding adaptations that pay for themselves – as all adaptations must – in the differential replication of those who adopt the cultural items, or in the differential replication of the cultural items themselves, or both.<sup>50</sup>

So culture can confer fitness advantages, but the question remains for each

---

<sup>46</sup> Richerson and Boyd, *Not by Genes Alone*. 161 – 162.

<sup>47</sup> Although our capacity to spread information may be limited by how memorable that information is, and its likelihood of being retained by other individuals within our environment. Dennett, *Darwin's Dangerous Idea*. 345 – 361.

<sup>48</sup> Ibid. 363.

<sup>49</sup> Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. 159 – 194

<sup>50</sup> Dennett and McKay, "The Evolution of Misbelief." 508.

type of culture retained by selection: where does the fitness advantage lie? With the genetic individual who possesses the culture, the cultural information itself, or the group of individuals who share the cultural information? Each option paints a very different picture of the type of cultural information which might be conserved by selection.

#### *Individual fitness and selection for religion*

When cultural information enhances individual genetic fitness, and is reliably transmitted between individuals, it can be selected for. Cultural information that increases relative genetic fitness can be maintained as part of selection for individual phenotypes.<sup>51</sup> Many features of culture are obviously individually beneficial. From important local environmental information or techniques of tool use, to cultural traditions favouring offspring over and above other individuals within a group, there is plethora of culturally determined behaviours that help individuals survive and reproduce more effectively than those without the cultural information which causes such behaviours. If selection acting on individual genetic benefit is a dominant force then (all other things being equal) we should expect to see the continued selection of cultural information which causes genetically self interested behaviour.

There are aspects of many religions whose conservation looks as if it benefits the genetic fitness of the individuals who hold to them, and could therefore be explained through the processes of individual selection. Many religions encourage moderate lifestyles, abstinence from dangerous habits and provide psychological comfort and reassurance that impact positively on people's

---

<sup>51</sup> Sterelny, "The Evolution and Evolvability of Culture." 5 – 6.



physical health.<sup>52</sup> Further, there are many examples of religions encouraging and valuing procreation amongst their members.<sup>53</sup> Of course, individual benefit can take many forms. Inequality and bias within religious groups could promote individual fitness.<sup>54</sup> In all of these instances, the supernatural components of religious belief are individually adaptive because they serve to motivate the prescribed and proscribed behaviours within religions.<sup>55</sup> Regardless of the content of the religious belief, or how that belief originated, if it causes individually beneficial behaviour, it could be subject to individual selection.

Though cultural traits which benefit individual genetic fitness can spread through the differential reproduction of individuals which possess them, they can also spread because others can observe the genetic success they cause and so adopt them. Many times, adoption appears to be the more important means of transmission since the rate of transmission of this sort of cultural information is often not limited by the birth rate of those that possess it.

---

<sup>52</sup> Kenneth Pargament, "Is Religion Good for Your Health? It Depends " in *Religious Practice and Health: What the Research Says* (Washington D.C.: Heritage Foundation, 2008). Peter Hill and Kenneth Pargament, "Advances in the Conceptualization and Measurement of Religion and Spirituality Implications for Physical and Mental Health Research," *American Psychologist* 58, no. 1 (2003).

<sup>53</sup> The Anabaptist in the US provide a clear example of this sort of successful tradition. Richerson and Boyd, *Not by Genes Alone*. 180 – 190; Michael Blume, "Von Hayek and the Amish Fertility," in *The Nature of God - Evolution and Religion*, ed. Ulrich Frey (Tectum, 2010).

<sup>54</sup> Features within cultural groups which act to prevent these sorts of self interested behaviour are cited as likely evidence selection pressure on groups, a scenario I explore next. Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. 152 – 159; Christopher Boehm, *Hierarchy in the Forest: The Evolution of Egalitarian Behavior* (Massachusetts: Harvard University Press, 1999).

<sup>55</sup> Both Dennett and Wilson make similar observations in discussing the role of the supernatural within religious groups. David Sloan Wilson, *Darwin's Cathedral: Evolution, Religion and the Nature of Society* (Chicago: Chicago University Press 2002). 227 – 230; Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* 171 – 179.

Individual selection, though, cannot account for the maintenance of celibate behaviours within religions, or for the wide range of other religious behaviours which do not directly promote individual genetic fitness. Before looking to selection at another level, there are explanations that have been put forward for these sorts of religious costs from those committed to individual selection which need brief consideration here.

Some theorists propose that our tendency to religious belief is an inevitable by-product of other extremely advantageous aspects of our psychology.<sup>56</sup> This type of explanation offers many insights into likely origins of individual capacities for and propensities towards religious beliefs and behaviours.<sup>57</sup> Nevertheless, even if our capacities for and inclinations towards religiosity are a side effect of other selected-for features of our psychology, we are left without an explanation for the careful and elaborately structured beliefs and traditions that contribute to conserving individually costly or maladaptive religious behaviours (such as celibacy). If the transmission and maintenance of religious belief is a costly by-product of our psychology, we would still expect selection (genetic and cultural) to favour those individuals who engage in the least costly forms of religious belief.<sup>58</sup> The prevalence of carefully maintained costly religious behaviours across religious traditions shows that this is not

---

<sup>56</sup> Jesse M. Bering, "The Folk Psychology of Souls," *Behavioural and Brain Sciences* 29(2006).; Rodney Stark and Roger Finke, *Acts of Faith* (Berkeley: University of California Press, 2000).

<sup>57</sup> Dennett draws on a wide range of these to construct a thorough background for his arguments about the role of memes within religions. Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* Chapters 4 and 5.

<sup>58</sup> Although it could also be argued that celibacy could result as an extension of cognitive adaptations for displaying committed behaviours, the same question must be answered: why have the behaviours persisted in the face of their costs? Further, are they so carefully transmitted and supported within the religions within which they are found? These puzzling facts are not addressed through an emphasis on individual selection.

exclusively the case.

Another sort of explanation which looks to individual selection to explain the maintenance of individually maladaptive behaviour within cultural groups is found in the concept of 'fitness traps'.<sup>59</sup> The term is used to describe a situation wherein one individual within a group takes on a cost that brings a relative fitness advantage when the majority of other individuals are not undertaking the same cost. If others within the group subsequently also assume the cost, the relative advantage is lost, while the cost remains for all. For individuals within such groups there is no way out of the costly behaviour because refusing to undertake the now common costs involves an even larger fitness cost than undertaking them would. Classically cited examples within cultural evolution include foot-binding in historical China, or female genital mutilation in some Northern African communities.<sup>60</sup> Undoubtedly, such a dynamic could explain some expensive religious behaviour, especially involving competitions of prestige, such as initiations or feast giving behaviours.<sup>61</sup> While fitness traps offer a plausible explanation of the maintenance of some religious costs, they do not seem to offer insight into the development and maintenance of celibacy within religions. If an individual is celibate, then they undertake an absolute genetic cost. As such, there is no way for celibacy to have gained an initial individual fitness advantage for the individual practicing it.<sup>62</sup>

---

<sup>59</sup> Sterelny, "Snafus: An Evolutionary Perspective." 8 – 10.

<sup>60</sup> Ibid. 9.

<sup>61</sup> Ibid. 9.

<sup>62</sup> Of course, it could be that families place children into celibate practice in order to signal piety and wealth within their communities, and thus gain a relative advantage for the family as a whole, initially. This is plausible, but then the fitness advantage earned by the behaviour, celibacy, no longer rests on the individual, but on the family group they have come from. Though the individuals within the group are genetically related, this is a group selection (Note continues over page)

Within any religion, information may be maintained that serves to promote and enhance individual genetic fitness. However, though individual selection offers explanations for our capacity for conceiving of, transmitting and maintaining religion, it does not offer a complete explanation for the careful transmission and maintenance of celibacy.

### *Cultural fitness and selection for religion*

Another set of explanations for the retention of religious behaviours focuses on selection which acts on adaptive advantage within cultural information itself. Richard Dawkins coined the term 'meme' when he proposed that one explanation for the maintenance of individually costly behaviours within culture was the existence of units of culture that are subject to selection in their own right. That is, bits of cultural information that reproduce most successfully, no matter why (or the effect on the individual who possesses the bit of culture), are proportionally more prevalent amongst a given population, and spread further, outcompeting other possible bits of culture.<sup>63</sup> Dawkins suggested that these bits of culture were likely to be, in some instances, particulate in a way similar to genes, and so dubbed them 'memes'.<sup>64</sup>

---

scenario and I will leave the consideration of such scenarios for the discussion of group selection. Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. 71- 79

<sup>63</sup> This dynamic is possible because we constantly filter and select cultural information within an information environment that is opaque in regards to whether or not that culture will help or hinder our genetic best interest. Cultural enables us to gain information without having to wear the cost of trial and error learning on our own. The trade off for this saving in cost is a vulnerability to cultural information which may not actually benefit us. Sterelny, *Thought in a Hostile World*.

<sup>64</sup> Because of the distinct history of the term 'meme', and because of the current debates over its precise meaning and definition (see, for instance, Gers, "Human Culture and Cognition". or Sterelny, "Memes Revisited." ), I avoid using the term to refer to potential units of culture in (Note continues over page)

Meme theory offers one explanation for how non-functional or even maladaptive cultural information is maintained. If cultural information enhances its own ability to be reliably spread amongst individuals then it can be visible to selection, separate from its effects on those who transmit it.<sup>65</sup> Selection can favour individual memes which are good at spreading and maintaining themselves (for whatever reason - perhaps by exploiting a quirk of our innate psychology, an intractable social structure or a particular socio-historical circumstance). Cultural information can take any form as long as that form increases its relative spread.<sup>66</sup> As Dawkins put it: “What we have not previously considered is that the cultural trait may have evolved in the way it has simply because it is advantageous to itself.”<sup>67</sup>

Selection on cultural information alone does not necessarily predict that there must be disconnect between the individual fitness of a person with the information and the fitness of the cultural information itself.<sup>68</sup> If selection amongst cultural information is constant, then, eventually, less costly pieces of

---

this thesis, preferring the more neutral term ‘cultural information’. This term avoids a commitment to a fixed position on the gene-like nature of culture.

<sup>65</sup> Dennett, *Darwin's Dangerous Idea*; ———, *Breaking the Spell: Religion as a Natural Phenomenon* ; Richard Dawkins., *The Selfish Gene* (Oxford: Oxford University Press, 2006).

<sup>66</sup> This has led to the characterization of culture as composed of cogno-viruses, spreading through human minds for their own reproductive ends regardless of the effect on the genetic well-being of the host. However, Dennett points out that the metaphor can easily be turned slightly to present memes as symbionts, like the many millions of beneficial bacteria and other microorganism that humans rely on for our survival (Dennett, *Darwin's Dangerous Idea*. 340 - 341; ———, *Breaking the Spell: Religion as a Natural Phenomenon* 170 - 185.

<sup>67</sup> Dawkins., *The Selfish Gene*. 200. This position allowed Dawkins to explain genetically detrimental cultural behaviours using an individual focused model, similar to that proposed for genes, and therefore countering the claims of those theorists who held culturally determined individually detrimental behaviours as evidence of group selection.

<sup>68</sup> Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* 184.

cultural information should have the advantage over the more costly pieces.<sup>69</sup> However, in the short term, selection on cultural information can outweigh selection on individual genetic information, and this does offer one explanation for maladaptive culture.

Memetic explanations for the persistence and maintenance of religious information propose that religious information is good at spreading and therefore persists despite its apparent irrationality and cost.<sup>70</sup> Meme theory predicts competition between cultural information<sup>71</sup> – therefore we can expect religions comprised of the cultural information most effective at spreading will replace other religions within a given environment.<sup>72</sup> We can also predict the survival of religious information that creates appealing cultural parents.<sup>73</sup> Adherents might appear successful, trustworthy, or pious – whatever behaviour set created the most efficient cultural parent in that given environment. Further, religious information with an emphasis on conversion or outreach programs should be favoured. Attention grabbing, memorable

---

<sup>69</sup> Bulbulia, "Meme Infection or Religious Niche Construction? An Adaptationist Alternative to the Cultural Maladaptationist Hypothesis." 16 – 18; Dennett, *Darwin's Dangerous Idea*. 364 – 365.

<sup>70</sup> This provides an explanation for the place of the supernatural consistently across religions – particular sorts of information pertaining to the supernatural is very memorable, and thus very good at spreading. I follow Sterelny here, who argues that Dawkins' theory complements by-product hypotheses, which present the recurrent attractiveness of religiousness as a side effect of our evolved psychology (as mentioned earlier in discussion of individual selection). Sterelny, "Snafus: An Evolutionary Perspective." 12.

<sup>71</sup> Dennett, *Darwin's Dangerous Idea*. 348 – 352.

<sup>72</sup> ———, *Breaking the Spell: Religion as a Natural Phenomenon* 184 – 189.

<sup>73</sup> Common propensities to imitate the cultural behaviours of the successful within a given environment mean that cultural information which confers the appearance of success is more likely to be transmitted. Richerson and Boyd, *Not by Genes Alone*, Chapter 4; Robert Boyd and Peter Richerson, "Transmission Coupling Mechanisms: Cultural Group Selection," *Philosophical Transactions of the Royal Society Biological Sciences* 365(2010). 3792.

supernatural symbolism might also be predicted.<sup>74</sup> Anything that spreads the religious information relatively efficiently would be a candidate for retention, and could then be transmitted, and elaborated upon. Religious information can be considered functional, in this view, if it spreads itself better than other cultural information in the environment. From directives on how to live, dress and communicate, to missionary and outreach programs, to attention-grabbing art and music, there are features within many religions.

From the vantage point of meme theory it could be argued that celibacy provides a prime example of a behaviour caused by cultural information which has sabotaged individual genetic fitness in order to further its own spread. Celibacy, such an argument would go, is so effective at spreading the religious information which causes it, that it is selected for despite its material and genetic costs. Yet there are few religions where every adherent is celibate. Exceptions, such as the Shakers where the entire group is expected to be celibate, have come to extinction fairly quickly compared to traditions where only a proportion of the population is celibate (such as Catholicism, Buddhism or Jainism).<sup>75</sup>

If we assume that celibacy provides a pool of particularly efficacious cultural parents for the religions it exists within, and contributes to the spread of the tradition as a whole, then the adaptive advantage celibacy conveys must lie not just with the religious information dictating celibate behaviour for that

---

<sup>74</sup> Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* 134 – 151.

<sup>75</sup> Hector Qirko, "Altruistic Celibacy, Kin-Cue Manipulation and the Development of Religious Institutions," *Zygon* 39, no. 3 (2004).

individual, but with the religion as a whole.<sup>76</sup> In traditions such as the Shakers, celibacy is part of a larger suite of culturally dictated behaviours, all of which are subject to selection. In Shaker communities' celibacy does not appear to benefit the group, but instead seems to limit its reproductive potential. It is retained and perpetuated by selection on the whole cultural tradition and is transmitted as an integral part of the wider tradition. The whole group of cultural behaviours is selected for. In the other scenario, where only certain individuals are celibate, the group of people is selected for. The celibate behaviour is advantageous to the whole group of people, despite its cost for the individual who displays the behaviour. Both scenarios can result from selection on groups, and both result in the maintenance of costly cultural behaviours. As the success of religions such as Catholicism, Jainism, and Buddhism demonstrates, religious information that promotes celibacy only for some within a religion is more stable and enduring than that which dictates a total cessation of genetic fitness for the religious group that subscribes to it.

Meme theory provides an explanation for maladaptive or costly cultural information. Further, celibacy demonstrates that adaptive advantage can lie with one piece of cultural information, or it can lie with a larger complex of cultural information, such as a religion. It can also lie with a group of people

---

<sup>76</sup> Qirko's exploration of celibate behavior within religious institutions focuses on the range of information that serves to reinforce and maintain celibate behaviour, and how similar that behaviour is across traditions. Ibid; ———, "The Institutional Maintenance of Celibacy," *Current Anthropology* 43, no. 2 (2002). He proposes that innate propensities to recognise and favour kin are manipulated in order to secure individual commitment to celibacy against genetic best interests. But he leaves unanswered why the institutions themselves are favoured through selection. Selection of institutions can be understood in two ways: either as the selection of a network of self-reinforcing cultural information, selected to be extremely adept at propagating itself, or selection of a whole, bounded group of individuals. In both cases, it is the group which is selected for.



that share a religion.

### *Group fitness and selection for religion*

If culture confers adaptive advantage to a whole group, on average, such that that group is relatively more successful than other groups in the environment, then groups (and the culture that builds and maintains the adaptive advantage) can be selected. Adaptive advantage for a group can refer to two key forms – either it can refer to an advantage on average for the fitness of the genetic information contained within the group, or it can refer to an advantage on average for the cultural information that a group possesses. A combination of these two is possible as well, for the genetic well-being of a group and the continued cultural growth of a group can often be correlated.<sup>77</sup> I will now spend some time setting up both of these situations, as they form an important plank upon which the rest of my study is built. I will also introduce niche construction, and look at the ways that it constructs conditions ideal for CGS. At the end of this section, I return to discuss what sort of religion we might expect to see facilitated through continued niche construction which creates conditions in which CGS can occur.

The idea that adaptive advantage can rest in groups rather than individuals and that individually costly group functional behaviours can accumulate within groups because of this is not new. Darwin argued behaviours good for cultural

---

<sup>77</sup> As Richerson and Newson put it in their discussion of adaptive religion: “In the case of the group of individuals, we use “adaptive” to mean helping the group to continue and grow by recruiting new members and by helping the long-standing members to prosper and reproduce.” Peter Richerson and Lesley Newson, "Is Religion Adaptive? Yes, No, Neutral, but Mostly, We Don't Know," in *The Evolution of Religion: Studies, Theories, & Critiques*, ed. Joseph Bulbulia, et al. (Collins Foundation Press, 2008). 65.

groups could be selected for (even if they impair individual fitness) because of selection acting on the whole group.<sup>78</sup> Group selection was embraced in the early twentieth century, and became a hallmark of early evolutionary thinking, put forward to account for any individually harmful behaviour that potentially helped 'the group'.<sup>79</sup> However, better understandings of genetics and the mechanics of selection acting on individual genetic fitness led to a common opinion that easy acceptance of group selection was naïve, and did not acknowledge the constant pressure of individual selection.<sup>80</sup> By the mid-twentieth century it was generally accepted that though genetic groups could be selected for, certain conditions had to hold in order for this to occur and those conditions were very rare in nature.<sup>81</sup> Since then, several theorists have emerged who resolutely champion group selection.<sup>82</sup> As the debate over group

---

<sup>78</sup> Darwin, *The Descent of Man and Selection in Relation to Sex*, 172 – 180; cited in Peter Richerson and Robert Boyd, "Built for Speed, Not for Comfort: Darwinian Theory and Human Culture," *History and Philosophy of the Life Sciences* 23(2001). 12.

<sup>79</sup> For a brief history of the rise and fall of group selection theory, see Plotkin, *The Imagined World Made Real*. 213 – 247.

<sup>80</sup> Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. 36 – 71; Plotkin, *The Imagined World Made Real*. 228 – 230; Kim Sterelny, "The Return of the Group," *Philosophy of Science* 63, no. 4 (1996).

<sup>81</sup> One notable exception was kin groups, where, by virtue of the relatedness of the individuals involved, group selection was more likely. (Still, for kin selection to prevail there had to be suppression of selection on individuals within the kin group. Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. 67 – 79.) But generally, it was accepted that genetic group selection, outside of small kin groups, is an infrequent occurrence in the natural world

<sup>82</sup> Sober and Wilson defend the idea of group selection and challenge assumptions about its infrequency. Ibid; Wilson, *Darwin's Cathedral: Evolution, Religion and the Nature of Society*. The central issue of debate over group selection which they address is the occurrence of altruism within social groups. Across animal worlds, there exist examples of altruistic behaviours directed specifically towards in-group members. Group selection provided a neat explanation of such behaviours, while individual selection often fails to. (Selection on individuals should favour self-maximising behaviour, regardless of its effects on fellow in-group members. Individuals within a group of other cooperating individuals will do best, for themselves, if they

(Note continues over page)

selection has continued, it has become part of a wider discussion about the various levels selection can occur at.<sup>83</sup> The idea that selection can occur at multiple levels, and that it does so continuously, has come to be known as multi-level selection.

Multi-level selection is used now to explain the cooperative relationships found throughout nature. It highlights that almost every thing living is comprised of cooperating individual parts, which have, at some point, been subject to selection as a group.<sup>84</sup>

Multi-level selection describes how selection acts continuously at the level of individual parts and the level of the whole that the parts comprise simultaneously.<sup>85</sup> When selection at the higher level (the group of individual parts) is stronger than selection on the individual parts that construct the higher level, cooperative traits can prevail, and whatever function facilitates those cooperative traits can accumulate.<sup>86</sup> Higher-level structures (groups) are always vulnerable to a breakdown of that function, and selection at the individual level. The prevalence of multi-level selection throughout the natural world illustrates that the suppression of reproduction can bring adaptive

---

do not cooperate, while still gaining all the benefits of being within the cooperative group. Any behaviour promoting individual fitness should be selected for.)

<sup>83</sup> Samir Okasha, "Recent Work on the Levels of Selection Problem," *Human Nature Review* 3(2003). Sterelny, "The Return of the Group."

<sup>84</sup> Wilson, *Darwin's Cathedral: Evolution, Religion and the Nature of Society*. 17 – 20; Plotkin, *The Imagined World Made Real*. 235 – 237. As Okasha summarises it: "...the biological hierarchy is itself the product of evolution – entities further up the hierarchy, such as multi-cellular organisms, have obviously not been there since the beginning of life on earth. The same is true of cells and chromosomes. So ideally, we would like an evolutionary theory which explains how lower-level entities became aggregated into higher-level entities..." Okasha, "Chapter 8. The Units and Levels of Selection." 152

<sup>85</sup> Richerson and Boyd, *Not by Genes Alone*. 201 – 209.

<sup>86</sup> Plotkin, *The Imagined World Made Real*., 235 – 242.

advantage when organisms join forces in groups. Cancer illustrates neatly the need for individual units to constrain reproduction in order to benefit the greater good.

The question of human group selection can thus be located in a wider framework of cooperative behaviour across the multiple levels of the natural world, resulting from the processes of selection.<sup>87</sup> Yet despite the acceptance that human group selection is part of this wider debate, the problems which were raised initially with genetic group selection in the human context remain. The specific set of circumstances within which selection on the genes of a group of individuals will outweigh selection on the genes of an individual within that group can happen, but they seem to occur rarely on their own. Culture can make these circumstances more likely.<sup>88</sup> As Sterelny observes:

For many purposes, evolutionary biologists can treat the multi-celled organism as the adapted unit, and ignore the complications of multi-level selection. That is not true of human agents and the social groups they form. For human culture has features which tend to entrench differences between groups, which tend to make groups more homogenous in important respects (food preferences; foraging and resource use practices; marriage customs), and which tend to make shifting between groups uncommon and difficult. These features make cultural group selection powerful. Through the period in which human populations were divided into many culturally different groups, selection on groups was an important constraint on individual adaptation. But since groups are never perfectly homogeneous, and since migration is rarely utterly impossible, selection on individuals was also of continuing importance, constraining group-level adaptation...<sup>89</sup>

Culture massively increases the chance that conditions leading to group

---

<sup>87</sup> Sterelny, "The Return of the Group."

<sup>88</sup> Richerson and Boyd, *Not by Genes Alone.*, 162 – 163, 203 – 209.

<sup>89</sup> Sterelny, "Snafus: An Evolutionary Perspective." 10 – 11.

selection will hold, by making it possible for groups to recombine with a different proportion of co-operators and non-co-operators, relative to their neighbours, as well as making possible the constant selection for cultural strategies that discourage, detect and expose non-co-operators within the group.<sup>90</sup> Cultural adaptations facilitating cooperation within cultural groups can be favoured by selection when those groups meet the key conditions for selection - if there are distinct groups, displaying difference-making variation, if that variation survives into the next generation, and if there are other groups also within the environment. Selection favouring selfish genetic behaviours can then be outweighed by selection favouring (cultural or genetic) behaviours that are adaptive for the cultural group. If these conditions change, selection can favour individuals. Selection on individuals within human groups is never likely to be completely suppressed.

In human social worlds, conflict between levels of selection is likely to be an important source of maladaptation. For there is reason to expect selection on individuals and on groups to be both strong and conflicting. It is conflicting because human societies are not egalitarian: inequalities (and perhaps even differentiation) lead to conflicts of interest.<sup>91</sup>

The consensus that culture can facilitate selection on human groups encompasses two different general positions. First, cultural behaviours can

---

<sup>90</sup> "Group selection is powerful to the extent that (a) groups vary one from another in ways relevant to group-group competition; (b) they tend to generate new groups with their own characteristics; (c) they are internally homogenous, suppressing within group differences. Bounded cultural flow increases the extent to which human populations satisfy these conditions. In particular, conformist mechanisms obviously promote homogenisation. To the extent that conformist traditions entrench arbitrary norms, they promote differentiation too, increasing the variation that feeds into cultural group selection." ———, "Memes Revisited." 152.

<sup>91</sup> ———, "Snafus: An Evolutionary Perspective." 6.

enhance the genetic well-being of the group on average, and therefore selection could favour those cultural behaviours because of the relative local genetic advantage of the group (i.e. more off-spring equates with greater group size).<sup>92</sup> Or cultural behaviours can enhance the growth of the cultural group and therefore selection could favour those cultural behaviours because of the relative local cultural advantage of the group (i.e. more people adopt the cultural behaviour which equates with greater group size).<sup>93</sup> Both situations can result in the selective retention of cultural behaviours which enhance group well-being, even if they involve a sacrifice of potential individual fitness advantage.<sup>94</sup> However, because genetic selection is slow in comparison with cultural selection, we can predict that selection on culture alone will be more frequent and more visible within many populations.<sup>95</sup> For the rest of this study, I will focus on CGS as selection on the cultural traditions of a group, while remaining generally neutral about the possible effects of selection on the average genetic fitness of the group, even when some members of those groups

---

<sup>92</sup> In this scenario, culture influences genetic selection, which can lead to the selection of genetic traits that facilitate the adaptive cultural behaviour. Plotkin, *The Imagined World Made Real*. 235 – 236. Boyd and Richerson refer to this as ‘gene-culture co-evolution’. A classic example of this dynamic is the evolution of adult lactase tolerance amongst dairying populations. (Richerson and Boyd, *Not by Genes Alone*., 191 – 194. More generally, such a dynamic is crucial in explaining the evolution of the complex cognitive capacities that facilitate our cultural abilities and rich social lives. Sterelny, *Thought in a Hostile World*.

<sup>93</sup> Richerson and Boyd propose that cultural group selection may affect genetic change, or it may not. Richerson and Boyd, *Not by Genes Alone*. 209 – 211 while Dennett argues more explicitly that groups bound by cultural variants can be selected because of selection on the cultural variant alone. Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* 184 - 188, 403 n 5.

<sup>94</sup> This is because cultural groups with obviously successful, cooperative members are more likely to spread their culture than groups where the members are struggling. For a brief example, see Richerson and Boyd’s discussion of cultural group extinction in Papua New Guinea. Richerson and Boyd, *Not by Genes Alone*., 209.

<sup>95</sup> Dennett, *Darwin's Dangerous Idea*. Richerson and Boyd, *Not by Genes Alone*. 238 – 245.

are engaged in obviously genetically costly behaviours.<sup>96</sup>

When group level selection is strong, cultural features which co-ordinate cooperative behaviours should be maintained through selection. We find that across cultural groups, there are many ways that cooperative behaviour within groups is co-ordinated and promoted, and individually selfish behaviours discouraged. Often, individual self interest is tied to cooperative behaviours.

...in a world braced by norms and symbolic conventions, self-interest and social benefit will frequently converge. Such a world is one that powerfully diminishes the cognitive costs of social complexity. Norm governed worlds lead to salient, unambiguous co-operation and co-ordination signals...<sup>97</sup>

As Bulbulia points to here, signals of individual willingness to cooperate with others within a social group and other co-operative devices that provide some guarantee that individuals will participate honestly with fellow group members are likely to have been favoured by within group selection because they lessen the risks associated with interacting with others. As I will argue in the Buddhist context, religions facilitate such signals and devices, thus promoting cooperative behaviours within religious groups.

Niche construction describes the ways organisms alter their environments (their 'niche'), and therefore potentially the selection pressures acting on

---

<sup>96</sup> In the next chapter, I turn to consider more carefully where the boundaries of a cultural group subject to selection may be found. For now, I will just discuss the concept of cultural groups generally. Further, I will show that though the genetic costs of celibacy vary for individuals and for the groups those individuals are found. However, the cultural benefits that celibacy brings are consistent across Buddhist communities.

<sup>97</sup> Bulbulia, "Meme Infection or Religious Niche Construction? An Adaptationist Alternative to the Cultural Maladaptationist Hypothesis." 20 – 21.

them.<sup>98</sup> Shared cultural traditions are dense environments that shape the way individuals think, learn and act.<sup>99</sup> When humans live in culturally bounded groups, it is likely that all individuals within those culturally bounded groups share a cultural niche – they are exposed to similar information, share many of the same technologies, and have their cultural learning supported in the same ways.<sup>100</sup> Cultural environments are inherited by descendent generations. Understanding shared culture as an environmental niche allows us to see the way that cultural information constructs the learning environment of individuals, contributing to its own perpetuation by making the conditions favourable for CGS much more likely to occur. Selection at the level of the cultural group leads to the retention and amplification of behaviours which create environments needed for continued selection at the level of the group.

101

No where is this seen more clearly than in the case of religions. Religious

---

<sup>98</sup> John Odling-Smee, Kevin Laland, and Marcus Feldman, *Niche Construction: The Neglected Process in Evolution*, ed. Simon Levin and Henry Horn, Monographs in Population Biology (Princeton: Princeton University Press, 2003).

<sup>99</sup> Sterelny, *Thought in a Hostile World*.

<sup>100</sup> “On a niche construction model, generation N collectively modifies the environment of generation N - 1 in ways which scaffold the development in the downstream generation of the skills and information of the upstream generation. Learning can be organised and supported in ways that make it more reliable...Selection enters this picture not at the level of individuals within the group, but at the level of the group as a whole. For on this model there are no within generation differences in culturally transmitted resources on which selection can act. At the limit of collective transfer, all of the N - 1 generation get the same informational resources from the previous generation. So to the extent that selection is acting, it is acting at the level of groups, not on individuals within groups....If bounded flow mediated by niche construction takes place in a set of adjacent and interacting cultures, cultural group selection will act on them.” ———, “Mememes Revisited.” 151 -152.

<sup>101</sup> “Organisms do not just respond to their selective environments; they change them. Organisms are active, partially constructing their own niches, and this is especially true of us. Moreover, we do not just change our own environment, we change that of the next generation, both physically and informationally.” Ibid. 151.



traditions contain frameworks for moral behaviours which are taught to children, and usually enforced within the tradition itself. Many of these moral norms, as Wilson has argued, create and then maintain the conditions necessary for CGS to occur.<sup>102</sup>

Call a “religious niche” a system of organized behaviour and knowledge, together with whatever artefacts and other symbolic structures (musical scores, texts, religious architecture) that is supported, retained, improved, and transmitted at least in part because we possess cognitive capacities to believe and morally commit to supernatural realities and purposes...Whatever its psychological basis, the religious niche reduces social complexity by strengthening and disambiguating signals of co-operation...technologies that identify and project hard-to-fake signals of co-operative intention and motivation...modify the social worlds agents inhabit by supporting the norms on which co-operative patterns of exchange depend.<sup>103</sup>

If religions are dense cultural niches that contribute to the perpetuation of selection at the level of the religious group, through the coordination of cooperative behaviours and the suppression of selfish individual tendencies, then there should be evidence that shows this within the traditions. We do find many features of religions which co-ordinate cooperative behaviour within religious groups (such as shared norms of behaviour, morals, and belief in supernatural punishment). There are also features within many religions which promote hard to fake signals of religious commitment from their members (such as common appearance, the undertaking of individual costs for the tradition, and shared emotional arousal.)<sup>104</sup> These features exist across a

---

<sup>102</sup> Wilson, *Darwin's Cathedral: Evolution, Religion and the Nature of Society*.

<sup>103</sup> Bulbulia, "Meme Infection or Religious Niche Construction? An Adaptationist Alternative to the Cultural Maladaptationist Hypothesis." 21, 38.

<sup>104</sup> Richard Sosis and Candace Alcorta, "Signaling, Solidarity, and the Sacred: The Evolution of Religious Behavior," *Evolutionary Anthropology* 12(2003). Bulbulia, "Meme Infection or Religious (Note continues over page)

diversity of religions, and are often carefully taught within the traditions. The continued transmission and emphasis on these sorts of features within religions protects the continuation of the tradition itself, not only by replicating the information which compromises the tradition, but also by therefore promoting selection at the level of the religious group itself.

The data suggest that we are predisposed to produce, learn, and modify a religious niche. This niche, in turn, modifies us, and subsequent generations who inherit and further modify religious culture. Religion and religious minds elaborate each other. We are adapted to learn and transform our religious situation.<sup>105</sup>

If celibate behaviour enhances the well-being of the group to which the celibate individuals belong enough that selection on the group outweighs individual selection against celibate behaviours, then celibacy could be maintained through CGS, despite its individual costs.<sup>106</sup> I turn later in this thesis to discussing the ways in which celibacy might benefit the religious groups within which it occurs, either through acting as a signal of commitment to a shared religion, or through creating a subset of individuals within a religion who maintain and perpetuate the cooperative norms which underlie it. I will argue that the costs of celibacy are balanced by benefits to the religious group

---

Niche Construction? An Adaptationist Alternative to the Cultural Maladaptationist Hypothesis."

<sup>105</sup> Bulbulia, "Meme Infection or Religious Niche Construction? An Adaptationist Alternative to the Cultural Maladaptationist Hypothesis." 2 - 3.

<sup>106</sup> "What looks to be maladaptive in religion is exquisitely functional, not merely from the vantage point of religious cultures, but also from the position of the faithful who sustain them...the maladaptive aspects of religious cognition and culture are (in most contexts) only apparent. Obviously religion is sometimes maladaptive, but I urge that it is so precisely because religiosity pre-commits us to a social order, even when doing so opposes our immediate interests. Effective social policing requires investment and vigilance, and the costs of religion, I urge, are well accounted for as policing costs. Moreover, I argue that religion endures because we possess a layer of specialized cognitive adaptations designed to support and respond to religious culture." Ibid. 2.

within which it is found, and thus it can be maintained through the processes of CGS.

...the apparently maladaptive epistemic and practical costs that surround religious commitment are adaptations that better equip agents to solve the exchange problems that arise in complex social environments...Though not always adaptive, religiosity evolved as a powerful fuel for biological success.<sup>107</sup>

I will spend the rest of this thesis developing and applying CGS to the question of celibacy in the Buddhist context. The Buddhist Saṅgha illustrates that there can be a separation between cultural, material and genetic fitness within a group, and it illustrates ways in which this separation can enhance the structural integration and functioning of groups.

## **Summary**

Evolution describes how function can accumulate given the correct conditions. Culture, like genes, provides those conditions. There are several key ways that selection can lead to the accumulation of functional culture. Within a given environment, and within the huge range of cultural information an individual holds, all of the selection dynamics I have discussed can act simultaneously. For something as multi-faceted as a religion, composed of a multitude of different pieces of cultural information, there will likely be no simple selection dynamic that can be looked to for explanation. Culture can and does serve to promote the relative reproductive success of whatever level is subject to selection - be that an individual, an individual piece of cultural information, or groups of individuals bound together by shared cultural information. Cultural groups

---

<sup>107</sup> Ibid. 38.

have evolutionary trajectories separate from those individuals within them. Cultural information can be selected for any of these ends, or cultural information can be a non-adaptive side-effect of other adaptations, extraneous noise within traditions.<sup>108</sup> But what is clear is that selection can influence culture generally, and religion specifically.

Every religion is an amalgam of beliefs, practices, institutions, and organizations. These are webbed up with other domains of culture - art, social and political organization, family life, practical knowledge, and so on...In the face of biological and cultural complexity and diversity, phenomena like religion are unlikely to support sweeping generalizations about adaptation versus maladaptation. Theory tells us that many things are possible and the empirical cases seem to agree. Any generalizations will have to be based upon careful empirical work.<sup>109</sup>

One way of addressing Richerson and Newson's call for careful empirical work involves identifying a religious behaviour, considering the cultural information associated with that behaviour, and attempting to discern the selection process that may be acting to maintain that cultural information. We might find that one selection process can account for one cultural behaviour neatly, or it might be that the behaviour results because of different selection forces acting simultaneously. By exploring several key ways selection might act on culture, and what sorts of cultural information might result, I have here set the stage to

---

<sup>108</sup> Although these two explanations can work side by side - a piece of cultural information which begins existence as a side effect of adaptive process, can also be subject to selection for its adaptive benefit, a process referred to as exaptation. D.S Wilson, Lynn, S. J. , "Adaptive Misbeliefs Are Pervasive, but the Case for Positive Illusions Is Weak: Commentary on 'the Evolution of Misbelief'," *Behavioural Brain Sciences* 32, no. 6 (2009). 539, Dennett and McKay, "The Evolution of Misbelief." 548; Richard Sosis, "The Adaptationist-Byproduct Debate on the Evolution of Religion: Five Misunderstandings of the Adaptationist Program," *Journal of Cognition and Culture* 9(2009). 323.

<sup>109</sup> Richerson and Newson, "Is Religion Adaptive? Yes, No, Neutral, but Mostly, We Don't Know." 62 - 65.

argue that religious celibacy in some Buddhist contexts looks like the result of selection pressure acting on a group defined by shared support of the celibate Saṅgha.

## Methodology: Testing evolutionary hypotheses about religion

In this chapter, I draw on work from David Sloan Wilson, Elliott Sober, Peter Richerson and Robert Boyd, to construct a methodology for discussing celibacy within the Buddhist context as an effect of selection. As champions of CGS, Sober and Wilson have presented evidence in a number of case studies that CGS is implicated in the retention and transmission of religions. I point to some weaknesses in their cases studies as well as some strengths which I draw on to form my own case study. I also turn to briefly discuss the work of Boyd and Richerson, and the ways in which their work lays out arguments for CGS. I end this section by clarifying the way that these related methods specifically inform my case study, as well as discussing how future work could further the arguments that I put forward.

It is impossible to make sense of the coalescence of elements that constitute the religious system without noting that it appears as if it was designed for the purpose of uniting individuals under common purpose. Systems that can do what the religious system does are extremely low-probability arrangements. By an unimaginably large margin, most biologically possible arrangements cannot unite unrelated organisms under common purpose, achieve extraordinary self-sacrifice, and motivate large-scale cooperation and coordination. All of this suggests that the religious system is an adaptation. Now we must begin to properly evaluate this possibility.<sup>110</sup>

The first step in evaluating the possibility that religions have been shaped through natural selection because of their adaptive function is observing

---

<sup>110</sup> Sosis, "The Adaptationist-Byproduct Debate on the Evolution of Religion: Five Misunderstandings of the Adaptationist Program." 328 – 329.

design features within the traditions. Description of a tradition provides a starting point for assessment of the likely effects of selection processes. Each particular process (which I have outlined in the previous theory section – selection on individuals, selection on culture, and selection on groups) leads to a set of predictions, which can be tested against the facts found within the tradition itself.<sup>111</sup> Arguments for adaptive design can be put forward on the basis of discussion of predictions which emerge from theories of selection and both description of a tradition. In this way, progress towards a consensus on how selection affects culture and its possible outcomes on cultural traditions can be made.<sup>112</sup>

David Sloan Wilson has long argued that the evidence of CGS is obvious.<sup>113</sup> Much of Wilson's work on religion has been based on series of small case studies, in which he draws on a wide range of anthropological materials to make his case that religious traditions reflect design likely to have resulted

---

<sup>111</sup> Evolutionary hypotheses about religion, Wilson argues, can be tested by comparing the predictions they make to the form religions take, and thus the impact of evolutionary processes on religions can be demonstrated. Wilson, "Testing Major Evolutionary Hypotheses About Religion with a Random Sample."; Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. Boyd and Richerson introduce their discussion of adaptive culture in *Not by Genes Alone* by making this point explicit: "Typically, adaptive analyses make many detailed predictions about the character in question - explanations that can often be tested by studying the structure and behaviour of the organism in the field..." Richerson and Boyd, *Not by Genes Alone*. 103.

<sup>112</sup> Richerson and Boyd, *Not by Genes Alone*. 126 – 127; Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. 116 – 131.

<sup>113</sup> Wilson, *Darwin's Cathedral: Evolution, Religion and the Nature of Society*; ———, "Testing Major Evolutionary Hypotheses About Religion with a Random Sample."; David Sloan Wilson, "Human Groups as Adaptive Units: Towards a Permanent Consensus," in *The Innate Mind: Culture and Cognition*, ed. P. Carruthers, S. Laurence, and S. Stich (Oxford: Oxford University Press, In press); David Sloan Wilson and Edward O. Wilson, "Rethinking the Theoretical Foundation of Sociobiology," *The Quarterly Review of Biology* 82, no. 4 (2007); David Sloan Wilson and Edward O. Wilson, "Survival of the Selfless," *New Scientist* 196, no. 2628 (2007).

from selection on the religious group as a whole.<sup>114</sup> Wilson's qualitative approach (as illustrated in *Darwin's Cathedral* and "Testing Evolutionary Hypothesis with a Random Sample") provides the first step towards analysis of selection: description of apparent design can be used to discern the cases where the influence of CGS looks important, and thus to justify the further detailed analysis needed to conclusively show it.

Boyd, Richerson and Sosis also provide a number of cases that explore the possibility of CGS within religious groups. Many of their cases combine descriptive approaches with quantitative consideration of the relative fitness of religious groups.<sup>115</sup> Such cases provide evidence for the processes of CGS in action.<sup>116</sup> In this study, I explain how the maintenance of celibacy within Buddhist traditions contributes towards within group cohesion. Future studies that compared evidence of the longevity of Buddhist groups compared to other adjacent groups would complement and reinforce the conclusions I put forward in this study.<sup>117</sup>

---

<sup>114</sup> Wilson, *Darwin's Cathedral: Evolution, Religion and the Nature of Society*; ———, "Testing Major Evolutionary Hypotheses About Religion with a Random Sample."; Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*.

<sup>115</sup> Wilson, in other work, looked explicitly for quantitative reflections of population growth and shrinkage. See, for example, his discussion of the Dinka and Nuer populations, Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. 188 – 191; or his work with Kniffin on the utility of gossip within teams. However, the majority of his work on religion focuses on small, descriptive cases. K. M. and D. S. Wilson Kniffin, "Utilities of Gossip across Organizational Levels: Multilevel Selection, Free-Riders, and Teams.," *Human Nature* 16(2005).

<sup>116</sup> Richerson and Boyd, *Not by Genes Alone*. 1 – 5, 180 – 186; Richard Sosis, "Why Aren't We All Hutterites?," *Human Nature* 14, no. 2 (2004). Richard Sosis and Eric Bressler, "Cooperation and Commune Longevity: A Test of the Costly Signaling Theory of Religion," *Cross-Cultural Research* 37, no. 2 (2003).

<sup>117</sup> Richerson and Newson assert that for any solid empirical conclusions to be drawn there must be a careful balancing of costs and benefits at every level. Richerson and Newson, "Is Religion Adaptive? Yes, No, Neutral, but Mostly, We Don't Know." 65. This task is by no means (Note continues over page)



Wilson's descriptive cases provide the model from which I draw my argument for design. Wilson's approach is useful as there is not scope within a project of this size to draw together quantitative data of the type needed to show the relative fitness of religious communities conclusively. Wilson focuses on the behavioural outcomes correlated with religious features as evidence of design in action. As he puts it "When trying to explain a given feature of religion, the primary question is: 'what does it cause people to do?' This is the *only* relevant gold standard as far as proximate mechanisms are concerned."<sup>118</sup> Thus Wilson's methodology allows for a broad consideration of evidence on which a preliminary case for CGS can be built.

Sterelny and Griffiths, however, argue that adaptive hypotheses which describe a phenotypic feature and then fit ultimate evolutionary explanations to the known facts are more robust than those which describe the ultimate evolutionary pattern and then search to find examples which can be made to support it.<sup>119</sup> They rightly point out that when you go looking for examples to support your argument, then the way in which those examples will be interpreted is pre-determined. It could be argued that Wilson leaves himself open to this criticism by focusing almost exclusively on one particular selection dynamic that can act on culture.<sup>120</sup> But Wilson is not the only scholar open to

---

easy, and it is not one that I attempt here. Rather, I suggest that there is enough evidence to merit just such work being done for this specific case.

<sup>118</sup> Wilson, "Testing Major Evolutionary Hypotheses About Religion with a Random Sample."

<sup>119</sup> Sterelny and Griffiths, *Sex and Death: An Introduction to Philosophy and Biology*. 341, as well as broader discussion in "Chapter 10: Adaptation, Perfection, Function" 217 - 252.

<sup>120</sup> In Wilson, "Testing Major Evolutionary Hypotheses About Religion with a Random Sample.", he attempts to randomly select traditions to test, and finds that almost all show evidence of selection at the level of the cultural group. Though he does discuss traditions within which selection on the groups breaks down because of selection at the individual level, he does not consider any of these cases to support any hypothesis but multi-level selection.

the charge of selection bias – Dennett and Dawkins present examples of religions where selection on culture looks to have resulted in extreme genetic maladaptation,<sup>121</sup> while Boyd and Richerson present examples of cultural traditions which result in gene-culture co-evolution.<sup>122</sup> The ubiquity of case-selection bias indicates how difficult it is to avoid – preliminary hypothesis about traits are necessary to pique interest and lead to further investigation. In this study, I have aimed to address some of Sterelny and Griffiths’s criticism by discussing celibacy throughout the theory section, and therefore providing an introduction to why I argue that CGS could explain the retention of celibate traditions. I go on to open my case study by elaborating the reasons why I think that Buddhist celibacy is explained, at least in part, by CGS, in comparison to the other selective explanations put forward. I follow this by gathering and presenting more detailed descriptive evidence from within Buddhism to support my position.

Wilson’s argument is strongest in the cases where he selects cases to focus on which seem to directly challenge his hypothesis. In particular, his case study on Jainism, a religion “which initially posed the greatest challenge to the group-level adaptation hypothesis”<sup>123</sup> provides descriptive evidence that religious beliefs result in group functional behaviour, even if that behaviour is extremely costly for some individual believers. Selection not of clearly illustrative cases but of the most challenging cases can lead to a strong argument for a hypothesis. Following Wilson, I have selected a case which looks more plausible

---

<sup>121</sup> Dennett, *Breaking the Spell: Religion as a Natural Phenomenon* ; Richard Dawkins., *The God Delusion* (London: Bantam Press, 2006).

<sup>122</sup> Richerson and Boyd, *Not by Genes Alone*.

<sup>123</sup> Wilson, "Testing Major Evolutionary Hypotheses About Religion with a Random Sample." 436.

as an example of cultural maladaptation than as a group level adaptation. Buddhist celibacy makes an interesting case through which to test the hypothesis of CGS primarily because it looks so unlikely that CGS played an important role in its maintenance, as I explain.

To discern evidence for the processes of CGS, Wilson looks for descriptions of behaviours, caused by religious commitments, which seem as if they promote the interest of the group over the individual alone.<sup>124</sup> Wilson draws on scholarly descriptions of religious traditions, as well as primary texts,<sup>125</sup> for evidence that the proximate form of these traditions functions to promote group cohesion and suppress individual fitness where it counters group fitness. Though Wilson's use of sources is arguably not critical enough,<sup>126</sup> he does describe how features of the tradition serve to coordinate cooperative behaviour effectively, and then shows the retention of those features across time, indicating their relative success within the given environment.<sup>127</sup> This approach furnishes the

---

<sup>124</sup> ———, *Darwin's Cathedral: Evolution, Religion and the Nature of Society*.

<sup>125</sup> Though he does some times roam wider, as is illustrated in his use of the work of novelist Isaac Singer to corroborate his observations about the essential role of in-group and between group relations. Ibid. 142 – 145.

<sup>126</sup> In particular, his decision to rely on the work of Kevin MacDonald (in Ibid.) seems ill-advised. MacDonald is an evolutionary psychologist committed to the theory of group selection. More ominously, MacDonald's work has been used by anti-Semitic white supremacist groups to further their agenda. George Michael, "Professor Kevin Macdonald's Critique of Judaism: Legitimate Scholarship or the Intellectualization of Anti-Semitism?," *Journal of Church and State* 48, no. 4 (2006). Indeed, MacDonald has been involved in the defense of holocaust deniers, and the Department of Psychology within which he works has formally distanced themselves from his material. Alison Schneider, "A California State Professor Is Attacked for His Defense of a Holocaust Denier," *The Chronicle of Higher Education* 46, no. 42 (2000). Thus Wilson's heavy reliance on MacDonald's material indicates a lack of discretion.

<sup>127</sup> There is a clear danger of tautology here which Heinrich et. al. identify in their paper Heinrich, Boyd, and Richerson, "Five Misunderstandings About Cultural Evolution." They summarise: "How do we know whether a bit of a tune or a catch phrase is a fit meme? Often, it seems, only by asking whether the meme has successfully spread. This is dangerous territory. Used in this way, natural selection is a useless, or even misleading, tautology... We believe that (Note continues over page)

model I draw on to consider Buddhist celibacy. I begin by considering whether celibacy, as a set of costly behaviours, can plausibly be seen as increasing cultural group fitness. If the behaviour does not enhance cultural group fitness, then there is little support for the hypothesis that increasing group fitness is the ultimate function of those particular individually costly behaviours. I follow this by presenting the ways in which Buddhism maintains celibate behaviours within communities. Even if individually costly behaviours can be shown to be group beneficial, there is still the question of whether or not they can be attributed to the religious beliefs that the individual holds.

Wilson sees this causal relationship as unproblematic,<sup>128</sup> a conviction I do not share. It is obvious that commitment to religious beliefs can cause individuals to alter their behaviour. But it is not obvious that scriptures and catechisms Wilson chooses to regard as descriptions of ‘ideal’ design of behaviours within a given religion, are really such.<sup>129</sup> The relationship between ideal versions of religions described in such primary materials and the actual lived traditions are not always direct, and behaviours prescribed or proscribed in primary literatures cannot necessarily be read as literally describing real-life

---

constructing a fully-fledged theory of cultural evolution requires considering a longish list of psychological, social, and ecological processes that interact to generate the differential “fitness” of cultural variants.” 128 – 129. Wilson’s detailed case studies go somewhat towards addressing such concerns by considering other possible factors affecting the maintenance of religions, though in many of his treatments more could be done. In this case study, I operate with an awareness of the danger of tautology, and hope to address this by considering celibacy across a diverse range of Buddhist cultures.

<sup>128</sup> Wilson, *Darwin's Cathedral: Evolution, Religion and the Nature of Society*. 122.

<sup>129</sup> These, he holds, probably reflect what the tradition would look like if selection at the level of the group was the only force. As Wilson explains: “When we study religion as it is actually practised, we see group selection contending with, and not always prevailing against, other strong forces. When we study religion as it is idealized, we see something much closer to an expression of what would evolve by pure group-level selection.” *Ibid.* 46.

behaviours of believers.<sup>130</sup> A more compelling case would focus to the actual behaviours found only amongst a religious group, and not shared outside of the group. Correlation of those behaviours with commitment to a specific text or tradition could then be observed, and arguments about probable relationships (and therefore adaptive design) made. Throughout my case study, I do follow Wilson by drawing on primary material as evidence of behavioural norms and moral codes which prevail within Buddhist traditions. But I follow Wilson with awareness that the relationship between that material and behaviours is not uncontroversial, and may in some cases be shown to be incorrect. Rather than assuming that religious information that seems as if it causes group-beneficial behaviour in fact does, I identify religious information within Buddhisms which potentially contributes to motivating the group beneficial behaviours, and then look for evidence of the information's endurance and continued correlation with the behaviour. Where I can, I draw on anthropological accounts of Buddhist groups to bolster my claim that religious information leads to group beneficial behaviours, specifically reinforcing and supporting celibacy.

Finally, as Heinrich et. al. point out, there needs to be some evidence of the relative fitness of groups which display coordinated group-functional

---

<sup>130</sup> This point is summed up nicely by one author writing on Buddhist traditions: "Like most Buddhist scriptures the *Ugra* is above all a prescriptive document, composed by Buddhists seeking to establish (or at the very least, to reinforce) certain norms of thought and practice within their own religious community. To take their statements as providing a literal portrait of life in that community would thus be to commit a fundamental methodological error: the error of reading normative statements as if they were descriptive. The commission of this error has a long history in otherwise respectable Buddhist Studies circles, above all studies in the Vinaya, where the monastic rules have all too often been taken as descriptions of the way monks and nuns actually behaved. On the contrary...such prescriptions are frequently evidence of precisely the opposite." Jan Nattier, *A Few Good Men: The Bodhisattva Path According to the Inquiry of Ugra*, ed. Luis Gomez, Studies in the Buddhist Traditions (USA: University of Hawaii, 2003), 63.

behaviour, independent of historical, social or environmental effects.<sup>131</sup> The endurance of Buddhism through time and cross-culturally provides this evidence. Though the fortunes of Buddhist communities have waxed and waned over time and in any one location, the tradition has endured and been markedly successful in many different environments. I return to discuss this in more detail in the conclusion.

Arguments for the possible selective explanations put forward on the basis of descriptive accounts of religions face being labelled 'just-so' stories. However, Boyd and Richerson, who argue that such stories are a necessary first step to creating a set of robust hypotheses, and a more general consensus on the processes at work within cultural traditions. As they put it:

No Darwinian account of the evolution of any lineage of organisms entirely escapes being a how-possibly explanation. Nevertheless, some how-possibly explanations are better than others. They are better because they fit more of the available information, they are better grounded in theory, and they are productive of further work. While we can never be satisfied with how-possibly accounts, they can still yield appreciable progress.<sup>132</sup>

It is in this spirit that I will now construct a descriptive case which presents Buddhist celibacy as a likely result of CGS.

---

<sup>131</sup> Henrich, Boyd, and Richerson, "Five Misunderstandings About Cultural Evolution."

<sup>132</sup> Richerson and Boyd, *Not by Genes Alone*. 127.

## Case Study: Buddhist Celibacy

In the very long run Buddhism was strikingly successful: it became a world religion which until recently reigned over the Far East and mainland South-East Asia, the most populous areas of the globe, and now is making its way in the West. However, we need only look a little closer to see that this is not to be explained simply as the triumphant progress of the truth. In the Buddha's time and for many centuries afterwards in India his teaching competed with others on a more or less equal footing. It was not until the middle of the first millennium after Christ, ten to fifteen centuries after the Buddha, that its hegemony was firmly established in the rest of Asia and shortly thereafter it was on its way to extinction in India itself. Buddhism's history is one of many different episodes and in each episode different social, economic, and political factors – factors quite extraneous to Buddhism – have played a part. So even if we agree that Buddha's teaching was insightful and practicable, these virtues alone can hardly in themselves be regarded as the motive force in Buddhism's successes.<sup>133</sup>

In this case, I look for evidence that the central place of celibacy within Buddhism has resulted from processes of CGS. I explain first why I think celibacy provides evidence of CGS rather than cultural maladaptation. I discuss the possible costs and benefits of Buddhist celibacy, arguing that while its costs vary widely across the tradition, the benefits are consistent. I discuss where these benefits occur, and argue that the design of Buddhist traditions contributes directly to the maintenance of celibacy, therefore guaranteeing the continuation of those benefits. I spend the rest of the case showing that design, through a description of features of the tradition, and the way they could contribute to maintaining celibacy. By first demonstrating the adaptive benefit of celibate behaviours for Buddhist groups, and then demonstrating the design

---

<sup>133</sup> Michael Carrithers, *Buddha: A Very Short Introduction* (Oxford: Oxford University Press, 2001). 79.

which maintains those benefits, I hope to construct a convincing how-possibly explanation for the long term maintenance of extremely costly behaviours within Buddhism, across diverse socio-cultural traditions and historical circumstances.

Throughout this case, though, I remain mindful of Carrithers' observation about the diversity of circumstantial facts and conditions which have led to Buddhism's success. I am not claiming that the processes of CGS can explain the success of Buddhism generally. Rather, I hope to gather evidence that celibacy promotes conditions in which CGS can occur, and that this could lead to the careful maintenance and transmission of celibate behaviours, despite their costs, within Buddhism.

### *Defining 'the group' within Buddhist communities*

The success of the early Buddhism thus assumes both a desire on the part of certain members of the population to give up 'normal society' or 'the household life', and sufficient good will on the part of those remaining in normal society to allow them to do so.<sup>134</sup>

Celibate individuals within Buddhism often live together as part of the Saṅgha (which translates literally as 'group').<sup>135</sup> The Saṅgha, cannot exist on its own, though. It relies on lay communities for all material support and new recruits.<sup>136</sup> When considering whether CGS can offer an explanation for the

---

<sup>134</sup> Rupert Gethin, *The Foundations of Buddhism* (Oxford: Oxford University Press, 1998). 85.

<sup>135</sup> Charles S. Prebish, *Buddhist Monastic Discipline: The Sanskrit Pratimoksa Sutras of the Mahasamghikas and Mulasarvastivadins* (New York: Pennsylvania State University, 1975). 3 – 4.

<sup>136</sup> I am aware that Buddhism encompassed various definitions of the Sangha, and that some of these, such as the famous 'fourfold Saṅgha' (comprising *bhikkhu*, *bhikkhuni*, laymen and laywomen) also included a place for laypeople in 'Saṅgha' defined more broadly. However, for the purposes of this study, I will leave these complexities and instead note that the term was (Note continues over page)



maintenance of the Saṅgha, we need to decide where the boundaries of the group subject to selection are drawn. Here, I explore two possible ways that we can distinguish the cultural group(s) subject to selection within Buddhism – either the Saṅgha and the community which supports it are two separate groups, or the whole Buddhist community is best understood as one cultural group, with two distinct parts. Each scenario leads us to different conclusions about the costs of celibacy. I will argue, though, that in either situation the benefits of celibate behaviours outweigh the costs for both potential groups. I end this section by exploring the unique features of celibacy which make it more effective at symbolically marking a sub-group within a wider population than other possible cultural behaviours. Celibacy is an exquisitely functional cultural behaviour, promoting cooperative behaviour across whole Buddhist communities, and leading to continued selection for celibacy despite its cost.

In laying out the benefits which I argue the laity gain from support of the Saṅgha, I do not intend to present a rival theory to emic understandings of the relationship between lay people and the Saṅgha which presents it as an exchange of material goods for spiritual goods. Rather, I explore an additional layer to the relationship by describing the culturally adaptive benefits that result. This addition explains why selection would retain celibate behaviours, and the features of the tradition which maintain celibate behaviours.

A successful group will be maintained, regardless of the costs associated with that success. Thus the processes of CGS offers a potential explanation of the retention of celibacy within Buddhist traditions – celibate behaviours allow

---

also used in an exclusive sense to refer to monastics only. By convention, I will also use it in that manner.

Buddhist groups to spread and so celibacy is maintained, despite its genetic cost.<sup>137</sup> But, as I covered briefly in the previous chapter, defining what a group is in a specific instance can be difficult.<sup>138</sup>

The real scientific question is, what kinds of population structure can produce enough variation between groups so that selection at that level can have an important effect?...There is no need for groups to be sharply bounded, individual-like entities. The only requirement is that there are persistent cultural differences between groups and these differences must affect the groups' competitive ability. Winning groups must replace losing groups...<sup>139</sup>

While often cultural and genetic fitness of groups are correlated (i.e. groups which are culturally fit in a given environment are likely to be genetically fit because genetic fitness can enhance cultural fitness) remember that this correlation is not necessary for the spread of cultural groups.<sup>140</sup> By focusing on cultural fitness, I hope to bypass the problems inherent in trying to demonstrate the relative genetic fitness of specific cultural groups.

Boyd and Richerson argue that a group can be defined by any cultural information that differentiates it from other groups, and provided the differences between groups are great enough, selection can occur at the level

---

<sup>137</sup> As I explore in the later part of this section, the genetic cost of celibacy in the Buddhist context is not necessarily as absolute as it first appears, increasing the possibility that the benefits of celibacy can outweigh the costs and it can thus be retained through selection.

<sup>138</sup> Sterelny, "The Return of the Group." Richerson and Boyd, *Not by Genes Alone*. 203; Wilson, *Darwin's Cathedral: Evolution, Religion and the Nature of Society*. 11 – 17; Plotkin, *The Imagined World Made Real*. 214.

<sup>139</sup> Richerson and Boyd, *Not by Genes Alone*. 203, 207.

<sup>140</sup> See previous discussion in theory section. People are more likely to accept cultural information from those who are obviously successful, or accept cultural information which is held by the majority within an environment, and reproductive success in many societies has been likely to contribute to both of these. Though as Boyd and Richerson observe, this dynamic has changed substantially in many modern cultures, and here is now a widespread disconnect between cultural success. *Ibid.* 152 – 187.

of the cultural group.<sup>141</sup> Celibacy within Buddhism distinguishes two groups of people: those who are celibate (i.e. the Saṅgha itself) and those that support celibacy, through the provision of material support as well as new recruits. This second, wider group takes in the whole local Buddhist community, including *bhikkhu* within the Saṅgha, as they support celibacy through their continued cooperative behaviours.

It is this wider group, I believe, that is the most likely candidate for selection. Both *bhikkhu* and laity participate in support of the Saṅgha, and I will argue that support of the Saṅgha is the crucial behaviour which defines the cultural group subject to selection. But both scenarios are possible – the group being selected for could either be the Saṅgha alone, or the whole community within which the Saṅgha exists.

No matter which group you look at, though, the cost of celibacy must be explained in order to understand how selection can act on the group. If the group is the celibate individuals, and it is the institution that they form (i.e. just the Saṅgha itself) which garners the benefits of celibate behaviours, then we must explain the success of communities which are subject to their parasitism. From this point of view celibacy looks like a massive cultural maladaptation, both for the celibate individuals within the selected-for group (the Saṅgha) and for the communities that support it. If the group is the whole community within which the celibacy occurs, then we must explain why communities that support the Saṅgha (materially and genetically) are not replaced, over time, with communities which do not support them. In both instances, it is the behaviours that celibacy necessitates which provides an explanation. Celibacy

---

<sup>141</sup> Ibid. 211 – 213.

contributes to the maintenance of the Saṅgha as a crucial component of a social structure which enhances and promotes cooperative behaviours across the whole Buddhist community. These benefits mean that both groups which can be demarcated by celibacy could potentially be subject to selection.

### **The costs of supporting the Saṅgha**

The universality and power of religious beliefs of some form or other – despite their costs – to billions of people around the world, every culture in history, and every hunter-gatherer society, strongly suggests that religion confers adaptive fitness benefits, for individuals and/or groups (at least in some contexts, for some people, and for some periods of human history). Of course, universality need not imply adaptation: other non-adaptive traits such as chins and male nipples are also globally and historically universal. However, they do not impose significant costs. Religion does.<sup>142</sup>

The Saṅgha is costly for the communities which support it. The fitness costs that supporting *bhikkhu* entails vary widely across communities, across families and across individuals. For example, while some Tibetan families may experience direct financial benefit from having a monastic relative in high office, or benefit from smaller family sizes in an agricultural area that can sustain only a limited amount of people,<sup>143</sup> many Burmese families find themselves without an income or means of survival after a father and/or

---

<sup>142</sup> Dominic D. P. Johnson, "God Would Be a Costly Accident: Supernatural Beliefs as Adaptive. Commentary on 'the Evolution of Misbelief'," *Behavioural Brain Sciences* 32, no. 6 (2009). 524.

<sup>143</sup> For accounts of the fiscal benefits monastic ordination can entail see: Geoffrey Samuel, *Civilised Shamans: Buddhism in Tibetan Societies* (USA: Smithsonian Institution, 1993). Also John Crook and Henry Osmaston, eds., *Himalayan Buddhist Villages: Environment, Resources, Society and Religious Life in Zangskar, Ladakh* (Bristol: University of Bristol, 1994).

husband decides to join the Saṅgha.<sup>144</sup> Further, though I argue later on that the Saṅgha confers community-wide benefits in the communities that support it, many of those benefits are contingent upon the majority of *bhikkhu* behaving in accordance with strict behavioural prescriptions. In some communities many *bhikkhu* enjoy the social prestige and status associated with their position without observing the strenuous codes of conduct which are supposed to constrain their behaviour.<sup>145</sup> While some *bhikkhu* commit to the Saṅgha from childhood, others join after having children, so the genetic costs of celibate practice may vary from individual to individual and family to family.<sup>146</sup> Thus, the cost of maintaining the Saṅgha, as well as the potential benefit, varies widely across family groups, and across the communities within which they are found. However, though the amount of cost may vary, what is clear is that the Saṅgha does entail cost for the celibate individuals and for the communities upon which they rely. As Qirko describes it:

...if one foregoes reproduction for a lifetime, no benefit can be personally incurred that will outweigh the resulting loss of fitness, and no reciprocal benefits can be obtained at a later date. ...Celibacy in institutionalized settings is clearly altruistic, because organizations enjoy its benefits in at least two ways. First, the time and energy that would be devoted to reproduction, parental care, and care for relatives are sacrificed, not for offspring and other close kin, but for others in the organization, including leaders as well as abstract and supernatural entities. Second, the practice helps ensure the organizational control of wealth and other resources, because celibate members are likely to have fewer conflicts of interest with respect to acquiring, preserving, and

---

<sup>144</sup> Melford Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes* (Berkeley: University of California Press, 1982). 346.

<sup>145</sup> Ibid. 372 – 377.

<sup>146</sup> Ibid.

distributing resources.<sup>147</sup>

Despite such costs, Buddhist communities continue to support the Saṅgha.

There is an easy appeal in explaining the Saṅgha as a good example of a well-adapted cultural parasite. CGS acting on the Saṅgha as an institution alone would explain (at least in part) the careful maintenance of celibacy within the tradition: though maladaptive for the individuals within the Saṅgha, and maladaptive for the communities around the Saṅgha, celibacy is so adaptive for the Saṅgha itself that it has been selected for. Celibacy contributes to the redirection of all of the *bhikkhu*'s resources into the Saṅgha, in part it defines the Saṅgha, and celibacy also acts to secure lay support for the Saṅgha, as I turn to explain shortly. Thus we see the careful protection and maintenance of conditions which contribute to celibacy, despite individual genetic drives against such behaviours.<sup>148</sup> The propagation of Buddhist teaching by the Saṅgha, in this picture, is a good trick which maintains lay consent to the

---

<sup>147</sup> Qirko, "Altruistic Celibacy, Kin-Cue Manipulation and the Development of Religious Institutions." 683

<sup>148</sup> Boyd and Richerson assert that particularly maladaptive cultural variants would lead to an arms' race of sorts. Richerson and Boyd, *Not by Genes Alone*. 155-156. Selection at the cultural group level and selection at the individual genetic level would lead to an escalation of both individual impulses against celibate behaviours and cultural devices to maintain it. Many *bhikkhu* describe tension between individual sexual drives and the celibacy that Buddhist monastic life prescribes. For an interesting account of individual monks' utilization of meditative techniques to maintain celibacy, see Kamala Tiyanich, *Forest Recollections: Wandering Monks in Twentieth Century Thailand* (USA: University of Hawai'i Press, 1997). Chapter 5: Battling Sexual Desire. See also Melford Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vicissitudes* (USA: University of California Press, 1982). 366 – 369; Mohan Wijayaratna, *Buddhist Monastic Life* (USA: Cambridge University Press, 1990). 94. Maintaining celibacy against strong instinctual urges is seen as the hardest part of the lifestyle by some monks and many lay people, and there are a host of rules, regulations, practices and teachings that provide the environment in which individuals can maintain celibacy, as well as the techniques to suppress individual desire

continued support of the Saṅgha.<sup>149</sup> This is crucial to the continuation of the Sangha.

...without exchange between Saṅgha and laity, the Saṅgha would either have to become economically (and in all other ways) self-sufficient, or would simply cease to exist. In the first case, the Saṅgha would become close to a 'tribe'- the *gana* which Chattopadhyaya, for example, thinks may have been a prototype of the Saṅgha. Such a 'tribe' would then either need to reproduce its own membership (and become laicised thereby) or, if it maintained the rule of brahmacarya, would as now need to rely on a steady supply of recruits willing to accept a regimen in most respects like that of lay society but without sex and marriage. Here...the Shakers come to mind, as do the more self-contained, self-sufficient Buddhist monastic communities of East Asia. In this case, the durability of such communities as the Shakers is doubtful and the degree to which Buddhist communities of the self-contained type can be said to contribute to the type of Buddhist culture found in South Asia is equally dubious.<sup>150</sup>

Celibacy contributes strongly to both lay perceptions of *bhikkhu* as suitable fields of merit, and is an essential part of the *dhamma* which *bhikkhu* should embody. As I will explore, the laity's commitment to the Saṅgha as a field of merit and a source of *dhamma*, contributes to their continued willingness to support the Saṅgha within their communities. The Saṅgha cannot exist without the laity that supports them.

A maladaptationist explanation would paint this as a relationship of exploitation – while the laity believe they are receiving spiritual goods in exchange, there is no tangible benefit to the laity to outweigh their cost. There

---

<sup>149</sup> Denett uses the term 'good trick' to refer to a behavioural talent that protects or enhances its possessor's chances dramatically. Celibacy is just such a good trick for the Saṅgha. Dennett, *Darwin's Dangerous Idea*. 77.

<sup>150</sup> Ivan Strenski, "On Generalized Exchange and the Domestication of the Sangha," *Man, New Series* 18, no. 3 (1983).

is nothing in this picture, though, to explain why Buddhist communities, vulnerable to the costs of the Saṅgha, have not been replaced by other religious communities which do not demand such costly behaviours. Selection at the level of the cultural group offers no explanations of why cultural groups which were vulnerable (or which contained individuals which were vulnerable) to materially and genetically deleterious beliefs would not, in direct competition, be out-competed by those which were not.<sup>151</sup> In many of the environments in which Buddhism has been found, other religious cultures exist, and compete for time and resources of local populations.<sup>152</sup> Unless there was something in celibacy which made communities that support celibate individuals more likely to grow and spread than those without celibates, there is little reason to think that the behaviour would be maintained by selection for the thousands of years over which Buddhism has spread and thrived. Cultural variants can spread despite cost – there are many mismatches between culturally dictated behaviours and relative genetic fitness which attest to this.<sup>153</sup> But the perseverance of Buddhist celibacy in the face of various competing available religions suggests that alternate explanations exist.

One alternative can be found by looking to the behavioural effects that Buddhism has for the communities that support it. I argue in the second part of this case that the central tenets of Buddhism, and lay understandings of them,

---

<sup>151</sup> As in Strenski's example of the Shakers, religious groups which demand high costs from their members frequently become extinct. See also Boyd and Richerson's brief discussion of the dissolution and survival of cultural groups in Papua New Guinea. Richerson and Boyd, *Not by Genes Alone*. 208 – 211.

<sup>152</sup> For example, the Bon religion in Tibet, Confucianism and Daoism in China, Confucianism and Shinto in Japan.

<sup>153</sup> For a discussion of just a few such, see Richerson and Boyd, *Not by Genes Alone*. Chapter 5; also Sterelny, "Snafus: An Evolutionary Perspective."



help to coordinate cooperative behaviour within Buddhist communities. Celibate *bhikkhu* are the focal point of Buddhist culture, providing lay people with a commonly held moral compass around which their own behaviours are coordinated.<sup>154</sup> As I detail in the next section of this case, Buddhist celibacy promotes Buddhist teaching and lay commitment to it. Buddhist teaching alters the perceived benefits and costs which selfish and cooperative action entails, and thereby promotes cooperative behaviours within the communities which support celibate individuals. Also, the separation of the Saṅgha from the laity, maintained by the Saṅgha's celibacy, ensures that Buddhist communities are always composed of at least two groups, which, as I argue next, triggers inherent impulses towards in-group cooperation, and therefore increases cooperative behaviour within the Saṅgha and the laity. Thus, rather than a parasitic interaction, the Saṅgha exist in a symbiotic relationship with the laity, as the spiritual goods the laity receive from the Saṅgha, and the social structure the Saṅgha creates within these communities can result in a range of behaviours which promotes the cultural fitness of the whole Buddhist community which supports them.

### **The benefits of supporting the Saṅgha**

The extensiveness of intervillage interaction and cooperation instigated by the requirements of Buddhist action cannot be exaggerated...Buddhism is the primary source not only of intravillage cooperation, but also of intervillage integration. This interaction, although motivated by the desire for merit and other Buddhist goals, often leads to intervillage marriages, and the consequent family alliances contribute to much intervillage interaction for non-Buddhist

---

<sup>154</sup>R. M. L. Gethin, *The Buddhist Path to Awakening*, Oneworld Classics in Religious Studies (Oxford: Oneworld Publications, 2001). 107 – 110; Wijayaratna, *Buddhist Monastic Life*. 173 – 179.

ends...In the absence of Buddhism, then, Burmese society might well have consisted of atomised and fragmented villages, with little relation to each other, while within the village each family might well constitute a more or less self contained entity sufficient unto itself. If this has not happened, Buddhism has certainly been a primary instrument for preventing it.<sup>155</sup>

Before going on to present the evidence of design for the benefits I have briefly outlined here, I want to expand on why I argue that the Saṅgha's separation from the laity is important in coordinating and promoting cooperative behaviours. The presence of the Saṅgha as separate within Buddhist communities could stimulate cooperative behaviour both within the Saṅgha and within the wider community because it creates an environment that mimics between-group competition. Though there is no actual competition (genetic or cultural) between the Saṅgha and the laity, there is absorption of finite material resources similar to what happens when genetic or cultural competition exists. This could trigger impulses towards in-group cooperation in face of competition.

It has been argued that throughout our evolution, and especially in the emergence of our cultural cognition, CGS has been a crucially important process.<sup>156</sup> Experiments have shown that individuals display cooperative behaviour more often towards fellow members of symbolically marked groups – even if the symbols marking the groups are arbitrary and recent.<sup>157</sup> There is evidence that, whether by virtue of early cultural conditioning or genetic inheritance, human psychology is primed to identify symbolically marked groups, to adjust cooperative behaviour according to the parameters of those

---

<sup>155</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 469 – 471.

<sup>156</sup> Sterelny, *Thought in a Hostile World*.

<sup>157</sup> Richerson and Boyd, *Not by Genes Alone*. 220 – 224.

groups, and that our predisposition towards in-group cooperation is fundamental and recurrent.<sup>158</sup> In a population psychologically primed to perceive in-groups, symbolically marking sub-groups could trigger predispositions towards cooperative in-group behaviours within those subgroups. A group of religious believers constructed constantly of two mutually created but separated sub-groups could make it more likely that co-operation within each sub-group could be maintained. The average cooperative behaviour could be increased through the fostering of in-group identity, in opposition to another 'group' (which does not actually pose a material or cultural threat). As a whole, the cooperation of the community is enhanced through the separation of segments of the population into sub-groups. This suggests that such a community would be more cooperative, on average, than a community of the same size without internal division.<sup>159</sup>

The presence of the Saṅgha within communities divides them into (at least) two separate sub-groups, thereby triggering cooperative tendencies which are the result of thousands of years of CGS acting on the human lineage. The Saṅgha inspires cooperative, group focused behaviours in both sub-groups – the Saṅgha itself, and the lay Buddhist believers. If the benefits of enhanced cooperation outweighed the genetic and material costs of maintaining the Saṅgha, then selection should favour the internally-divided community. Buddhism has spread successfully across wide swathes of Asia, restructuring

---

<sup>158</sup> Ibid. 222.

<sup>159</sup> There is no reason to assume that there need be only two groups within an environment – the same dynamic would apply if there were multiple marked groups within a population, or if there were outside competitors as well as internal division.

many communities in exactly this pattern.<sup>160</sup>

In this picture, much of the benefit of celibacy comes from the way in which it encourages individuals within the Saṅgha to perceive their interests as correlated with the Saṅgha itself, rather than with kin groups from which they came. The individual *bhikkhu*'s vested interest in the well-being of their familial groups is reduced because they have no further genetic involvement with that group.<sup>161</sup>

In postulating a locus of value and aspiration beyond the here-and-now, but locating access to it in the tradition it is their job to preserve, clerics thus form a distinct social group – indicated clearly in the Buddhist case, as elsewhere, by the social fact of celibacy...<sup>162</sup>

Though other distinguishing cultural behaviours could, and no doubt do, demarcate groups effectively, there are unique properties of celibate behaviours which make it uniquely adept at promoting cooperation at the level of the larger group to which the celibate individual belongs. Celibate behaviours and the support of celibate behaviours signal commitment to Buddhism.

---

<sup>160</sup> Gethin, *The Foundations of Buddhism*. 1. Also, perhaps a population which consisted of two separated sub-groups would not suffer a decrease in co-operative behaviour once they dominated an environment. Co-operative behaviour can be maintained within the population – whether there are other populations for it to compete against or not – through the utilisation of predispositions towards in-group cooperation, which are triggered in environments of seeming between group competition. Richerson and Boyd, *Not by Genes Alone*. 221 – 224. Thus, the need for an outside, competing population to sustain co-operative behaviour is circumvented somewhat through the maintenance of conditions which mimic competition. The central position of a symbolically delineated sub-group within Buddhist communities contributes directly to their longevity and success, regardless of whether or not they filled a specific social environment.

<sup>161</sup> Qirko, "Altruistic Celibacy, Kin-Cue Manipulation and the Development of Religious Institutions." 683

<sup>162</sup> Steven Collins, *Nirvana and Other Buddhist Felicities* (Cambridge: Cambridge University Press, 1998), 24

...Religion looks maladaptive enough for selection to have eliminated religious tendencies. Instead, religious beliefs are connected to powerful emotional and motivational systems, they are impervious to scientific criticism, and constrain thought and behavior in manifold ways. They impair us. To understand why this is so, we need to consider how this self-imposed impairment functions to signal our co-operative commitments to those around us.<sup>163</sup>

As Bulbulia points to here, such commitment signals are one way in which religious behaviours are adaptive for a community. Commitment signals provide guarantees of mutual cooperative behaviours, and establish the existence of shared behavioural norms.<sup>164</sup>

Whether we view the Saṅgha as a totally separate group or a part of wider Buddhist group, the relationship between the Saṅgha and the laity is mutually beneficial. However, I hold that the best way of characterising the Saṅgha and the communities that support them is as one cultural group. The boundaries between communities and the Saṅgha can be fluid (*bhikkhu* come from the surrounding community and in some instances return to that community). Also, the Saṅgha seldom exists outside the communities which support it.<sup>165</sup> For these reasons, the Saṅgha is most accurately characterised as a sub-group within a larger group. That larger group can be distinguished by its support for the Saṅgha - both lay support as well as support of the *bhikkhu* that comprise it.

Selection may be able to act on the Saṅgha alone because of its separation from

---

<sup>163</sup> Bulbulia, "Meme Infection or Religious Niche Construction? An Adaptationist Alternative to the Cultural Maladaptationist Hypothesis." 18

<sup>164</sup> Ibid.

<sup>165</sup> Some exceptions within the tradition include those monks which dwell in forests and remote wilderness separate from surrounding communities. Most often though even these *bhikkhu* rely on some support from laity. Tiyavanich, *Forest Recollections: Wandering Monks in Twentieth Century Thailand.*, Gethin, *The Foundations of Buddhism.* 95 - 101

the laity, but selection can also act at the level of the whole Buddhist community within which the Saṅgha exists. It is selection on the whole Buddhist community which ultimately determines the survival of the Saṅgha (since the Saṅgha depends on the whole community for its survival) so it is to selection at the level of the whole group we should look for explanation of the retention of adaptive design within Buddhism. In the next section, I explore how many features of Buddhism reflect adaptive design which coordinates cooperative behaviour across this wider group.

In this section, I have detailed the basis of my argument that the Saṅgha is not an example of a maladaptive cogno-parasite, but rather is a cultural sub-group which brings benefit to the whole community which supports it by increasing and coordinating cooperative behaviours within that community. Celibacy is effective at directing committed individuals resources to the Saṅgha, and at separating the Saṅgha from the laity. This separation, I proposed, could trigger innate predispositions to cooperation within each sub-group and increase the cooperation of the whole group on average. Thus it is that I argue that whole Buddhist communities, demarcated from other possible groups in the environment by their support of the Saṅgha, are groups subject to selection.

#### *Importance of celibacy*

In this section, I address why abstaining from sexual activity might act as a symbol of group identity when other less genetically costly, symbols could work. I briefly suggest that the privileging of celibate behaviours within Buddhist societies has resulted from the specific historical circumstances which Buddhism arose in, and made the acceptance of celibacy as a symbol

more likely. I then go on to argue that there are unique features of celibacy that explain why it is more effective as a symbolic device for dividing Buddhist communities than other symbolic markers. Celibacy acts to delineate *bhikkhu* from laity in an effective, yet still flexible way. Anyone can partake, it is not necessarily permanent, it involves no dangerous or painful body modification, and it does not create a separate caste group. I reiterate that though celibacy is genetically and materially costly, the costs are not necessarily as high as they first appear, which indicates that as a symbol it could be cheaper than it seems. Thus maintaining celibacy as a functional tool to separate the Saṅgha from the laity within the tradition is not inherently much more expensive than other symbols of demarcation which could be used. I end this section by discussing how the tradition also draws on other symbols of demarcation in conjunction with celibacy to separate the Saṅgha from the laity. What emerges is a picture of a tradition that is centred on uniquely effective cultural behaviour, celibacy, while also utilising other cultural symbols to maintain cooperative behaviours. The next section of the case study builds on this picture of the unique utility of celibacy by detailing how the tradition maintains and perpetuates support of celibate behaviours.

Celibacy as a marker of worldly renunciation was an accepted symbol of religious vocation within pre-modern Indian culture.<sup>166</sup> Buddhism emerged from the ascetic tradition found in Northern India at the time of the Buddha.<sup>167</sup>

---

<sup>166</sup> Collins, *Nirvana and Other Buddhist Felicities* 32 – 33. Gethin discusses the range of ascetic lifestyles present during that time (though he doesn't explicitly mention sexual activity) focusing on the renunciation aspects of these lifestyles. Gethin, *The Foundations of Buddhism*. 9 – 13. Celibacy is viewed as an important part of ascetic practice because sexual activity is associated with involvement with the social world which the ascetic has renounced.

<sup>167</sup> Gethin, *The Foundations of Buddhism*. 9 – 13.

It is not then surprising that celibacy was one of the characteristics that marked Buddha's followers. Still, though, its retention across the whole of the Saṅgha for thousands of years is striking. Celibacy has remained a symbol of religious devotion and practice across many religions found in India, though most often it is limited to people over a certain age that have already had a family and a social life. But in Buddhism, it is institutionalised and applied to all *bhikkhu*, men who are otherwise of marriageable age and status. The unique features of celibacy explain why a tradition geared towards maintaining celibate behaviours might thrive.

Celibacy separates *bhikkhu* from the wider social world which they come from, because it precludes them participating in marriage or family life. Celibacy fundamentally divides the Saṅgha from the communities within which they subsist.

In the vast majority of cases the “aloneness” of the monk and nun...is not physical isolation but the social fact of their singleness: that is, the fact that they are single, unmarried, and so in the original sense of the word, celibate.<sup>168</sup>

While cultural symbols might mark individuals as unfit or not willing to participate in marriage, celibacy actually stops that behaviour. It creates the Saṅgha as an exclusive, separate group, open only to those willing and/or able to observe celibacy.

The alternative structure of asceticism “outside society” embodies the particular form of cultural universalism/individualism proposed by the Buddhists transcendental vision: Buddhist soteriology is immediately applicable and relevant for anyone, anywhere, but in so far as the ultimate attainment, nirvana, requires a life of permanent celibacy, it is

---

<sup>168</sup> Collins, *Nirvana and Other Buddhist Felicities* 34 - 35.



not, in principle as well as in practice, for everyone – that is, not everyone all at once...<sup>169</sup>

It is not just the sexual activity of the *bhikkhu* which celibacy can effectively eliminate, but also their reproductive capacity and the attendant social consequences of reproduction. Collins, in his exploration of Nirvana within Buddhism, considered the possible logic behind the privileging of celibacy with the South Asian traditions and concluded:

...from among the many and various responses to physicality, one first connects the body and sexual reproduction to the inevitability of aging and death. If what is brought into being by physical means is always subject to decay and death, and if it is to be possible to imagine and aspire to a kind of well-being which will not decay and die, then that state must be non-physical, or at least even if in some sense physical then asexual, because not physically reproductive. And if the final state of felicity is asexual, then perhaps the highest form of human life is asexual. If, lastly, as in most Southern Asian cases, the state of salvation is not conceived as achievable only after death but also during life, then clearly celibacy is a *sine qua non*.<sup>170</sup>

Collins' perspective on the logic of celibacy within the schema of Buddhist thought points to two interesting features of celibate practice relevant to this discussion. First, celibate practice is privileged within Buddhism as a necessary part of achieving *Nibbāna* because it removes the individual from the cycle of reproduction.<sup>171</sup> Further, even though *bhikkhu* can be inclined to celibacy for a range of personal reasons<sup>172</sup> in their willing abandonment of sexual activity, they provide a continual example of the lived teaching of the *bhikkhu* for the laity and of the possibility of abandoning attachment.

---

<sup>169</sup> Ibid. 34.

<sup>170</sup> Ibid. 33.

<sup>171</sup> Gethin, *The Foundations of Buddhism*. 89.

<sup>172</sup> Collins, *Nirvana and Other Buddhist Felicities* 32.

As a central tenet of belonging to the Saṅgha, celibacy is a behaviour which everyone can theoretically observe (i.e. there is no impediment to their doing so, provided they meet minimal physical criteria dictated in the Vinaya, which I explore shortly). That is, it is not dictated by social caste or appearance or other arbitrary markers. As such, it makes Saṅgha membership a possibility for every man within a community. Though many could join, not that many do.

Celibacy (in conjunction with the other ascetic requirements of the Saṅgha) removes membership in the Saṅgha from the reach of the vast majority of the Buddhist community. In doing so, it effectively also creates a continued need for celibate individuals within society. In the the upcoming discussion of the Saṅgha as a field of merit it will become clear that *bhikkhus* spiritual power is thought to result from their ascetic lifestyle. It is held that that spiritual power can be tapped by the laity, through supporting the *bhikkhu*. A celibate *bhikkhu* thus provides a rich field of merit for lay people, merit which otherwise would be inaccessible to them.

Celibacy removes *bhikkhu* from society, but in the same stroke renders them dependent upon the lay society they have come from. Without the laity, the Saṅgha cannot continue to exist. While creating separation, celibacy simultaneously creates dependence. Other cultural symbols, though they might demarcate one group from another, do not fulfil this same dual function.

Another benefit that celibacy offers over other possible cultural symbols is that it is not necessarily permanent. Individuals who decide to quit the Saṅgha or who are expelled for whatever reason are not permanently marked as members by some form of body modification. Instead, individuals can abandon celibate behaviours. This protects the integrity of the Saṅgha, in that non-observant

*bhikkhu* who are expelled are not permanently marked as belonging to the Saṅgha. Also, as a central behavioural tenet of membership, celibacy means that the Saṅgha can incorporate new members much easier than they might if membership depended on elaborate body modification or expensive ornaments.<sup>173</sup> Though there is recognition amongst Buddhists that observing celibacy is incredibly challenging and physically arduous,<sup>174</sup> it is not a behaviour which involves painful physical mortification or body alteration. As such, it does not involve a mortality cost for recruits (though genetically the outcome may be the same.)

The fact of celibacy's genetic cost does, though, make it more expensive than other potential symbols. However, as I pointed to earlier, the costs of celibacy can vary widely. In some instances, individuals become *bhikkhu* later in life after having families. In other communities, it is common for individuals to come and go from the Saṅgha. Celibacy could be cheaper than it initially appears, and does not necessarily involve absolute genetic sacrifice. It is the separation of the *bhikkhu* from lay society that is important. This suggests that the actual genetic output of the celibate monks is of secondary importance. A *bhikkhu* who had already had a family, and then renounced them for the celibate life would be less genetically costly for the community which sustains him, but potentially just as effective at promoting cooperative behavior within

---

<sup>173</sup> Though it must be noted that although the Vinaya requires robes to be only rags sewn together, in many Buddhist traditions, elaborate ceremonies and procedures have grown up around robes, and they have become costly garments to produce. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 300 – 302. Bhikkhu Thanissaro, "Bhikkhu Pātimokkha: The Bhikkhus' Code of Discipline," Access to Insight, <http://www.accesstoinsight.org/tipitaka/vin/sv/bhikkhu-pati.html#pc-part2>.

<sup>174</sup> For discussion of *bhikkhu*'s impression of the challenges celibacy entails, see Tiyanich, *Forest Recollections: Wandering Monks in Twentieth Century Thailand*. Chapter 5, or Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 366 – 368.

the community.<sup>175</sup> Because celibacy can achieve these benefits without incurring absolute genetic costs, it is a cheaper tool for demarcating sub-groups than it otherwise appears.

While celibacy delineates the Saṅgha from the society around them, it is not the only cultural symbol used within the Buddhist tradition to create this separation. A wide range of rules which dictate *bhikkhus* behaviours and appearance mark *bhikkhu* as belonging to the Saṅgha, rather than to lay society.<sup>176</sup> For example, *bhikkhu*'s appearance is carefully regulated, with rules dictating their haircut, clothing and possessions all found within the tradition. *Bhikkhu* receive a new name at ordination.<sup>177</sup> Further, spending too much time associating with family or in lay society generally is discouraged. All of these features serve to mark *bhikkhu* as separate from society and part of the Saṅgha. None of them, though, contribute as concretely as celibacy to promoting cooperative behaviours within Buddhist communities. These other symbolic behaviours do complement and reinforce celibate behaviours and I will refer back to them throughout my exploration of how it is that the tradition maintains and perpetuates celibacy and the cooperative behaviours it engenders.

Celibacy may have arisen within Buddhist tradition as a result of the historical circumstances surrounding the traditions foundation. But the recurrence and maintenance of celibacy has a wider explanation than that – celibacy is

---

<sup>175</sup> A model of such behaviors is suggested by the story of Guatama Buddha, and a similar model arises again in the Jataka Tales. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 346 – 348.

<sup>176</sup> Qirko, "Altruistic Celibacy, Kin-Cue Manipulation and the Development of Religious Institutions." 63.

<sup>177</sup> Ibid. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 291.

uniquely functional at separating a group of individuals from a wider community, while at the same time necessitating that sub-groups continued relationship with the wider community group. Given also that it is a flexible, easily adoptable symbol of adherence which does not require bodily alteration or material expense, its use in conjunction with other cultural symbols makes sense. As I turn now to describe the maintenance of celibacy, and its role in maintaining cognitive behaviours, it is with an awareness that these specific features of celibacy also contribute to its longevity and usefulness within a community.

### *How celibacy is maintained*

To argue that celibacy within the Saṅgha brings benefit to the local religious communities supporting it is to argue that, to some degree, the suppression of the individual *bhikkhu*'s genetic self interest is important to the continuation of selection for Buddhist traditions. If this is correct, we would expect to see the stability of elements of the tradition that secure and perpetuate celibate behaviours, as well as the cooperative behaviours it relies on. Many elements of Buddhist traditions do promote celibate behaviours, and have also remained stable across thousands of years of social, cultural and political change.<sup>178</sup> Here, I describe different elements of Buddhism which together facilitate the maintenance of the celibate Saṅgha and the range of cooperative behaviours necessary for its support. Buddhist tradition provides motivation for

---

<sup>178</sup> This is not to say that Buddhist traditions were uniformly successful at maintaining individual celibacy. Yet celibacy remains a consistent ideal across the spectrum of Buddhist tradition. Social disapproval of *bhikkhu* who do not comply with communal discipline is common. Spiro explores this explicitly in his discussion of the Burmese attitude to "men in yellow robes", *bhikkhu* who refuse to live according to the communal code of discipline. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 376 – 377; 404-414.

individuals to behave cooperatively, and the many forms this motivation takes, as well as its persistence, suggests blind selection for adaptive design.<sup>179</sup>

Within Buddhism, it is held that Buddha referred to the message he delivered as the Dhamma - Vinaya, which can be loosely translated as “the teaching and the discipline.”<sup>180</sup> Both elements of the Buddha’s message are responsible for the successful maintenance of celibacy within the tradition. Dhamma<sup>181</sup> describes reality in a way that alters individual assessment of cost and benefits of action from that based on observation or experience, motivating lay cooperative behaviours towards the Saṅgha, as well as towards other lay people, and paving the way for individual *bhikkhu*’s adherence to the code of

---

<sup>179</sup> The Buddha’s role as a designer is no doubt important in explaining the origin of the tradition, and its fit within the original environment within which it was conceived. However, over the centuries across which the Buddha’s teachings were transmitted material was added to the original teachings, and understanding of the prescribed behaviours. The whole of Buddhism, not just material attributable to the Buddha, brings about behaviours which are adaptive for the Buddhist community. No one individual can be credited for the thousands of years of careful maintenance and accumulation of functional culture reflected within Buddhism.

<sup>180</sup> This term emerges in the earliest writings of Buddhism. Its seeming simplicity belies the wider and more complicated nuances that both terms have taken across the centuries.

John T. Bullitt, "What Is Theravada Buddhism?," Access To Insight, <http://www.accesstoinight.org/lib/authors/bullitt/theravada.html>. Dhamma has a number of key meanings within Buddhist tradition, which change depending on the context. Here, I refer to Dhamma as the teachings of the Buddha that provide the doctrinal foundation for the communal discipline which binds the Saṅgha. In this sense, Dhamma describes “underlying laws of reality” Gethin, *The Foundations of Buddhism*. 319, and therefore provides the foundation for lay cooperation with the Saṅgha, and with other lay people. Dhamma can also be read in a wider sense to include the Vinaya (as it was also a part of the Buddha’s teachings) but for the purposes of this discussion, I will distinguish between them.

<sup>181</sup> Dhamma has not been static within Buddhism. Even in the earliest texts, there is evidence of later additions and alterations to what looks like the original material. Here, I draw on a range of authors’, some of whom discuss general points of doctrine, while others are engaged in more specific studies of certain elements of the tradition. Though some of the authors I cite are engaged in a discussion of specific text or period of change within Buddhist history, the points I draw from their work are generally found across the tradition, and as such I have left the distinct details to one side of the very general discussion I am engaged in here.

discipline found within the Vinaya. The Vinaya dictates allowed behaviour for *bhikkhus*, creating an environment within the Saṅgha where celibacy is much more likely to be maintained, and therefore contributing to the laity's continued support of the Saṅgha as a field of merit, crucial to lay-Saṅgha cooperation.

Buddhist teaching lays out a system of beliefs and practices which can bring about behaviours conducive to the maintenance of the Saṅgha, and to the maintenance of cooperation more generally. Here, I will explore the role played by concepts of rebirth, *kamma* and merit in sustaining support of the Saṅgha, including individual participation as a *bhikkhu*, and lay support of Saṅgha. Though I argue that the Dhamma explains why individuals and communities support and participate in the Saṅgha at all, it does not offer a complete picture of how the Saṅgha is maintained as a cooperative institution in many disparate local communities. So I will follow this by exploring how celibacy specifically and cooperation more generally is promoted within the Saṅgha. I consider the effects of celibacy maintenance within the Saṅgha, between the laity and the Saṅgha, and within the laity. Together, the discipline of the Saṅgha and the commitment of the laity to their support function to maintain cooperative communities.

Focusing on the parts of the Buddhist tradition that maintain and perpetuate celibate behaviours shows how individually-costly, group-beneficial behaviours secure cooperation within religious groups, as well as how that behaviour is perpetuated.

## The Teaching

If we accept that celibacy is in some ways a costly behaviour (certainly for the individual and perhaps more broadly for the community the individual depends on), then we must explain why individuals and families within those communities support the Saṅgha. Previously, I argued that the maintenance of the Saṅgha internally divides communities and thus enhances cooperative behaviours across the whole community. Now, I turn to look at the specific reasons that communities and individuals support the Saṅgha.

The Buddhist presentation of reality seems designed to take advantage of certain human cognitive predispositions. I argue that this design leads individuals to accept a presentation of reality where assessments of the costs and benefits of individual action are altered from reality. Central to this alteration are the doctrines of rebirth and *kamma*. I claim that they motivate cooperative behaviours amongst the laity generally, as well as motivating individuals to become and remain celibate. Further, the way Dhamma structures religious communities facilitates the spread of Buddhist tradition by increasing the chances that the information constituting the Buddhist tradition will spread. This brief discussion shows how some of the basic elements of Buddhism may structure it to replicate and spread successfully. I then look at merit as an important correlate to *kamma*, explicitly related to support of the Saṅgha, and show how commitment to it would function to induce cooperation between the laity and the Saṅgha, as well as provide additional pressure for the maintenance of celibacy within the Saṅgha. Commitment to the content of Buddhist teaching protects and transmits celibate behaviours.

This discussion explores some of the potential psychological impetus for



obedience that we find within the Saṅgha. When, in the next part of the case study, I turn to consider the extensive rules and regulations binding the Saṅgha, this backdrop will offer one explanation for the individual willingness to commit to these rules.

### *Buddhism and biased cultural transmission*

In the first chapter, I asserted that culture consists of information transmitted between individuals.<sup>182</sup> That information, as I asserted in Chapter 1, is made in part of representations of patterns.<sup>183</sup> We are predisposed to seeing patterns in our environments, to representing those patterns, and to transmitting those representations to others. The Dhamma facilitates cooperative behaviours, because, in part, the Buddha's message is shaped to take advantage of predispositions first for perceiving patterns within our environments (which may or may not exist), and second for receiving representations of patterns that may bring adaptive benefit from others. As I quoted in Chapter 1, Ger proposed that:

Patterns are abstract idealisations of information in the world. Cultural transmission relies on forming a pattern representation in one mind that is a replicate of a pattern representation in another mind on the basis of information passed through a public representation.<sup>184</sup>

The enlightenment of the Buddha, a founding narrative within Buddhism,<sup>185</sup> reads as if it is describing this process – the Buddha formed an ‘abstract

---

<sup>182</sup> Gers, "Human Culture and Cognition". Chapter 2.8, 2.9, Chapter 6.

<sup>183</sup> "Patterns are abstract idealisations of information in the world. Cultural transmission relies on forming a pattern representation in one mind that is a replicate of a pattern representation in another mind on the basis of information passed through a public representation." Ibid. 139.

<sup>184</sup> Ibid. 139.

<sup>185</sup> Gethin, *The Foundations of Buddhism*. 16 – 27.

idealisation of information' which he had discerned in the world, and he represented that pattern to other individuals within his environment. That is, the Buddha perceived a pattern within his environment: he saw that suffering had a causal relationship with action, and that suffering could potentially be stopped.<sup>186</sup> After this realisation, the narrative holds that he represented this pattern publicly. He first taught a small group of ascetics he had formally practiced with, then other disciples, who grew in number throughout his life and following his death.<sup>187</sup> The origin and subsequent perpetuation of the Buddha's message is described as if it relied on common predispositions to perceiving and transmitting patterned information.

Boyd and Richerson, amongst others, argue that there exist a set of biases which direct where we receive cultural information from.<sup>188</sup> These biases allow us to filter our intake of cultural information without having to bear the full costs of trial and error learning that discerning the information ourselves would entail. While there is some disagreement about how many of these biases there are, how important they are, or their degree of innateness,<sup>189</sup> it is commonly accepted people have predispositions towards receiving information from certain types of individuals. While the likely influence of any

---

<sup>186</sup> As Gethin describes it: "Finally, seated in meditation beneath an *aśvattha* tree on the banks of the *Narañjanā* in what is now the north Indian state of Bihar, he had an experience which affected him profoundly, convincing him he had come to the end of his quest. While a historian can make no judgement on the nature of this experience, Buddhism (apparently bearing witness to the Buddha's own understanding of his experience) calls it *bodhi* or 'awakening' and characterises it as involving the deepest understanding of the nature of suffering, its cause, its cessation and the way leading to its cessation." *Ibid.* 16.

<sup>187</sup> *Ibid.* 24 – 27.

<sup>188</sup> Richerson and Boyd, *Not by Genes Alone*. 116 – 132; Gers, "Human Culture and Cognition". Chapter 3.

<sup>189</sup> For one position as well as a discussion of some of the recent positions on this issue, see Gers, "Human Culture and Cognition". Chapter 3.

one of these particular biases changes from individual to individual, as well as from culture to culture,<sup>190</sup> they act as filters on the information we receive from others. Within Buddhism, we find cultural information which can take advantage of these biases in order to further its spread.

The Buddha described a pattern which, in part, fits universal facts about existence, while also being, in part, unable to be verified by empirical means. The tradition asserts that there is causation between actions and subsequent fortune or misfortune, despite the fact that this causal relationship cannot be empirically proved.<sup>191</sup> This presentation of causation takes advantage of our inclinations to change our actions in accordance with information judged trustworthy. That is, it takes advantage of our bias towards receiving information from successful individuals.

Our bias towards receiving information from seemingly successful or prestigious individuals is widespread.<sup>192</sup> In the narratives of early Buddhist tradition, we find evidence that such a bias may have contributed to the initial spread of the Buddha's message. The Buddha's apparent success at achieving enlightenment helps to motivate the ascetics he preaches to give up their own practice and adopt his. It seems that the earliest Buddhists impressed other individuals as those who had successfully achieved spiritual enlightenment.<sup>193</sup>

---

<sup>190</sup> Ibid. 68 – 84.

<sup>191</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissititudes*. 90 – 108. It must be noted that those within Buddhism would hold that it can be empirically proved, but only for who has the supernatural cognitive powers of a Buddha. However, as I asserted in Chapter 1, this discussion is firmly placed within the scientific paradigm, therefore such considerations must be laid to one side here.

<sup>192</sup> Richerson and Boyd, *Not by Genes Alone*. 124.

<sup>193</sup> Here I am skirting over issues of the accuracy within the earliest Buddhist texts. While there is little doubt that these texts have had periodic addition and alteration, in the absence of an (Note continues over page)

It is reported that some of the first committed individuals were swayed by the appearance of success of other converts.<sup>194</sup> In the society the Buddha lived in, there appear to have been many other individuals seeking similar religious goals.<sup>195</sup> The Buddha's, and his students', apparent success at a valued occupation makes them more likely as cultural parents, and could have rendered his representations more attractive to other individuals. We find that throughout the tradition, the narrative of the Buddha's enlightenment remains a model for success and an inspiration for individuals to join the Saṅgha.<sup>196</sup>

Within Buddhism, the Saṅgha are regarded as living their life in a way which will eventually achieve release from suffering.<sup>197</sup> For this, they are accorded respect and deference. In short, *bhikkhu* are prestigious individuals within Buddhist communities.<sup>198</sup> This prestige makes it more likely that the cultural information they publicly represent (in this case not only through delivering the Dhamma in the form of sermons and direct teaching, but also by living the Dhamma and providing a model of that behaviour) will be received by other individuals around them. While only some individuals actually imitate the

---

alternate account of the successful establishment and spread of Buddhism, I see little reason to question these basic elements within it. The Buddha preached his message to others interested in the pursuit of a spiritual career, recruiting them to Buddhism, and those individuals recruited others.

<sup>194</sup> Carrithers, *Buddha: A Very Short Introduction*. 81 – 85.

<sup>195</sup> Gethin, *The Foundations of Buddhism*. 10 – 11.

<sup>196</sup> “...The towering figure of the (*sammāsam*) Buddha Gautama is a ubiquitous model for the Buddhist.” Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 61.

<sup>197</sup> As Spiro puts it: “The third element of the Buddhist trinity, the order of monks, is both an exemplification of the world-renunciatory orientation of the Buddhist message, and a model for it...Ideals are difficult to sustain without models who embody them; without exemplary models the idea itself can die. A villager expressed this very well when he said that it is important that monks comply with the Vinaya rules because “otherwise Buddhism will be destroyed.” 474.

<sup>198</sup> Spiro 402 – 404.

Saṅgha and become *bhikkhus*, many more commit to their teaching, and thus behave in cooperative ways that allow the Saṅgha to survive in their communities.

Finally, we are predisposed to accepting information held by the majority of other individuals around us. Once Buddhism is embraced by a certain amount of people within a local area, it becomes more likely that it will spread further. It is also worth noting that if commitment to Buddhism is common within a religious community, then it is more likely that successful and prestigious individuals within that community, (be they Saṅgha or not), will also be committed to Buddhism and therefore the spread of the tradition will be further enhanced through prestige and success bias.

We can see then that in the presentation of the Buddha as a uniquely successful individual, the establishment and reiteration of the Saṅgha as a prestigious group within society, and the commitment of the majority of individuals within Buddhist societies, Buddhism is designed to take advantage of common psychological filters against untrustworthy information to further its own spread.

Buddhist teaching is not unique because pieces of it are shaped to utilise our universal cognitive predispositions. There are many types of cultural information which describe patterns in the phenomenal world, and alter committed individuals behaviours in accordance with that information. There are also many examples of cultural information that plays on our predispositions to trust information from successful or prestigious individuals, or even accept information because it is common. But Buddhism also secures the well-being of the groups which replicate it, therefore ensuring its own

survival through the instigation and maintenance of cooperative behaviours. Buddhism dictates individually costly behaviour, celibacy, and through it ensures cooperative behaviours. This is an example of how individually costly behaviours can be maintained by selection on religious groups.

Though many pieces of Buddhism can be traced from earlier religions which existed in the Indian milieu of the Buddha's time,<sup>199</sup> it represented a unique combination of information which proved remarkably successful, due, it can be argued, to the specific combination of cultural information found therein. As I turn now to discuss specifics of Buddhism, I will argue this particular combination of cultural information acts to rearrange perception of the costs and benefits of action and thus motivates cooperative action around the Saṅgha.

#### *Basic doctrine and its effects on behaviours*

Many parts of the Buddhist tradition seem designed for bringing about psychological effects in committed individuals.<sup>200</sup> Here, I argue that one psychological effect of the tradition is a rearrangement of the perceived costs and benefits of action, such that committed individuals are motivated to behave in group cooperative ways. I claim that central doctrinal tenets bring about these changes and point towards evidence that behaviour in accordance with that design has occurred across Buddhist communities. Some of the

---

<sup>199</sup> See for example Egge's discussion of the *kamma* within the early Buddhist tradition. James R. Egge, *Religious Giving and the Invention of Karma in Theravada Buddhism* (Richmond: Curzon Press, 2002).

<sup>200</sup> Within Buddhism there is a body of teaching that describes the effects that the teaching can have on the psychology of committed individuals. For brief discussion see Gethin, *The Foundations of Buddhism*. 119 – 126.

teachings which look most obviously designed to bring about alterations in mental process are found in detailed doctrinal tracts aimed at the minority of committed individuals (that is, adept *bhikkhu* committed to study).<sup>201</sup> But I show here that even in the most basic details of Buddhist doctrine we find patterns of cultural information which can alter the behaviour of committed individuals, whether they are laity or monastic.

### ***The four noble truths***

The doctrine of the four noble truths provides the foundation for an alteration of believer's perception of the costs and benefits of action. As I pointed to earlier, the four noble truths describe the pattern that Buddha recognised within existence, and the action he recommended based on that pattern.

What did the Buddha teach? The early sūtras present the Buddha's teaching as the solution to a problem. This problem is the fundamental problem of life. In Sanskrit and Pali the problem is termed *duḥkha/dukkha*, which can be approximately translated as 'suffering'. This statement can be regarded as expressing the basic orientation of Buddhism, for all times and all places. Its classic formulation is by way of 'four noble truths': the truth of the nature of suffering, the truth of the nature of its cause, the truth of the nature of its cessation, and the truth of the nature of the path leading to its cessation.<sup>202</sup>

The first noble truth holds that all existence is suffering. That is, all experience, even pleasant experience, ultimately leads to suffering. Everyone, at some point, experiences suffering. The basis of this truth, the universal prevalence of suffering, is observable, and its obvious reality is crucial in motivating

---

<sup>201</sup> Gethin discusses the appeal of many of the detailed doctrinal tracts found in Pāṭh literature Ibid. 163 – 164; while Spiro repeatedly emphasises the lack of interest in this sort of higher learning displayed by many Saṅgha and the vast majority of lay people. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vicissitudes*. 359 – 364.

<sup>202</sup> Gethin, *The Foundations of Buddhism*. 59.

adherence to the teaching.<sup>203</sup> As Gethin observes: “Without some nascent sense of suffering and what conduces to its cessation one would not and could not even begin the practice of the path.”<sup>204</sup> The basis of the Buddha’s message in verifiable fact gives the Buddha’s teaching more apparent trustworthiness. The fact of suffering is verifiable, and forms the basis of the Buddha’s observation about the causal patterns within existence. This lends credibility to the whole of the teaching: suffering exists, and the Buddha observed this correctly, so why would he not observe the other elements included in his teaching correctly as well?

However, while suffering may be observable, the extreme nature of the first noble truth – that all experience is ultimately suffering – is not obviously verifiable. Further, as I argue shortly, the fact that many individuals still strive for pleasant experiences, despite the fact that the first noble truth holds that even those are ultimately suffering, also provides impetus for cooperative action within the tradition.<sup>205</sup>

The second and third noble truths build on the appeal of the first truth. They

---

<sup>203</sup> As Spiro reports in the Burmese context: “For the Burmese, as for the rest of mankind, the notion that life involves suffering is not an article of faith; it is a datum of everyday experience.” Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 74.

<sup>204</sup> Gethin, *The Foundations of Buddhism*. 84.

<sup>205</sup> Again, as Spiro observed in Burma “But it is one thing to agree that life involves suffering, and another to agree that life – every form of life – is suffering. This the Burmese find difficult to believe...With very few exceptions, all our interviews indicate that what the average Burman wants most of all is to be reborn as a wealthy human or – what is even more desirable – as a *deva* in one of the material heavens.” Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 74. Spiro also notes that for many of these individuals the truth of the Buddha’s teaching is accepted, though they have trouble seeing it for themselves: “When pressed they concede that...were they able to see things from a religious (*lokuttara*) point of view – as reality really is – they would recognise the truth of the Buddhist explanation for suffering.” ———, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 75.



offer an identifiable cause for suffering, and assert that there is a solution to it. Though this causal relationship (and its cessation) is not directly verifiable as suffering is, they hold strong appeal because they offer individuals the chance to control unpleasant parts of their lives. In short, these truths detail an identifiable payoff for adherence to the teaching – individuals potentially can escape suffering. The mitigation of potential suffering becomes part of the benefits in acting according to Buddhist tradition.<sup>206</sup> Although for each individual the appeal of that might vary, depending on the severity of suffering they feel, still, such a promise would potentially motivate behaviours that the tradition holds leads to the obliteration of suffering. These behaviours, I claim in the next section, maintain cooperation within Buddhist communities.

The cause of suffering as identified in the second noble truth is craving, which causes action, or *kamma*.<sup>207</sup> Human craving or desires are again a near universal human experience. This use of common human experience as a foundation increases the likelihood of its acceptance as truth.

The concept of *kamma* provides motivation for cooperative behaviours within Buddhism. *Kamma* dictates rebirth, and experiences within that rebirth.<sup>208</sup> *Kamma* causes continued existence, and therefore continued suffering (because

---

<sup>206</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*.

<sup>207</sup> Gethin briefly defines *kamma* as “good and bad actions of the body, speech and mind whose pleasant and unpleasant results are experienced in this and subsequent lives.” Gethin, *The Foundations of Buddhism*. 320. I will further note that as Harvey observes, *kamma* is held to be personal as “...a person is actually the *product* of his past karma: without it, he would not exist. *Kamma* can never bring results to the ‘wrong’ person...” Peter Harvey, *The Selfless Mind: Personality, Consciousness and Nirvana in Early Buddhism* Second ed. (Oxon: RoutledgeCurzon, 2004). 67.

<sup>208</sup> Gethin, *The Foundations of Buddhism*. 119; Bruce Matthews, "Post-Classical Developments in the Concepts of Karma and Rebirth in Theravada Buddhism," in *Karma and Rebirth: Post-Classical Developments*, ed. Ronald W. Neufeldt (Albany: State University of New York Press, 1986). 126

all existence is suffering, not because all *kamma* necessarily ends in unpleasant consequences). As Spiro observes:

In sum, the Burmese (and other Buddhists) are motivated to believe in the Buddhist doctrine of karma and its associated doctrine of merit because it provides them with a guaranteed means for satisfying their desire to transform present suffering into future pleasure...<sup>209</sup>

To further understand the doctrines' effects on individual motivation, it is necessary to consider the concept of rebirth.<sup>210</sup> Individual existence was not limited to this lifetime alone, but, it was held, recurred repeatedly through a potentially endless series of rebirths. The concept of rebirth adds motivational depth to the doctrine - not only is suffering a fact of this life, but of all future lives. Rebirth increases the motivational potential of the basic doctrine - the consequences of action (either good or bad) do not end in this life alone, but can be experienced throughout a multitude of possible existences.<sup>211</sup> A gift to a monk seems a small price to pay in comparison to multiple lifetimes spent in a hell.<sup>212</sup>

Buddhist cosmology reinforces the motivational powers of the idea of rebirth generally. Within the tradition, it is held that there are many potential planes of rebirth, ranging from hells full of torment and suffering, to heavens where

---

<sup>209</sup> Spiro 128 – 129. He goes on: “When the doctrine of karma is studied as a belief of religious actors rather than as a doctrine in a religious treatise, it becomes evident that Buddhists have cathected this doctrine not because it explains the present, by reference to the past, but because it offers the promise of affecting their future rebirths by action in the present.”

<sup>210</sup> In the religious cultural milieu the Buddha taught in, the concept of rebirth was common. Gethin, *The Foundations of Buddhism*. 27.

<sup>211</sup> Many of Spiro's respondents report fear of hell as motivationally salient. (See, for example, Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 368.)

<sup>212</sup> While the failure to give to a monk would not necessarily involve such dire consequences, it may be enough to mitigate previous bad *kamma* so that hell is avoided.

eons are spent in bliss and ease.<sup>213</sup> These elaborate worlds offer the promise of pleasant or unpleasant results for individuals' action – adding yet more incentive for individuals to act according to the tradition.

For the Burmese, hell is not merely a place name on the Buddhist cosmological map. Translated into a belief within the actor's own cognitive map, it has acquired intense motivational value; to avoid hell is one of his strongest desires. And it is little wonder. There are eight hells in Buddhism, each of which is eighty thousand years in duration, and for all that time there is not even one moment free from torture and pain.<sup>214</sup>

Such a cosmology obviously discourages behaviours which might lead to one of these hells, and encourages that which might lead to a heavenly realm of pleasant experience. But though the doctrine teaches that even though individuals can also experience pleasure, at least temporarily, in one of the heaven realms it also teaches that ultimately suffering returns. However there is, within the tradition, a solution offered.

In the final two noble truths, we find the basis of motivation for individuals to act in accordance with the Buddha's teaching. The third truth asserts that there is an end to suffering, while the fourth holds that that way is following the teaching of the Buddha. Both are crucial in motivating common action.

The Buddha's teaching thus represents the medicine for the disease of suffering. Or, according to the metaphor of the fourth truth, it is the 'path' (*mārga/magga*) or 'way' (*pratipad/paṭipadā*) that one follows in order to reach the destination that is the cessation of suffering... The first three truths primarily concern matters of Buddhist theory; with

---

<sup>213</sup> Gethin, *The Foundations of Buddhism*. 114 – 119.

<sup>214</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 121. This description is a simplification, as there are multiple different accounts of the organisation of the various planes of existence. Though Spiro simplifies, he makes the point that there are multiple planes of unpleasant existence where individuals can end if they accumulate bad kamma.

the fourth truth we come to Buddhist practice proper...<sup>215</sup>

The third noble truth proposes that there is an end to suffering, *nibbāna*. *Nibbāna*, as a goal, is held to appeal to those who wish to escape from existence completely.<sup>216</sup> However, for many people, escape from existence is not nearly as appealing as improvement in the circumstances of existence.<sup>217</sup>

The fourth noble truth is important to this discussion because it offers a prescription for how individuals can achieve their goals, be it the cessation of suffering or an increase in pleasurable experiences on the path to the cessation of suffering. While the term ‘path’ is sometimes used to refer broadly to the way of living that the Buddha described for the cessation of suffering, it is also a phrase that has added significance in Buddhist literature, and thus needs to be treated with some care. The ‘Noble Eightfold Path’ refers specifically to the practice of individuals who are progressing towards *nibbāna*: a very limited group of saints, *arahants* and *bodhisattvas*.<sup>218</sup> The Noble Eightfold Path provides a model for all other individuals to aspire to. It describes the ideal way individuals who have achieved the cessation of suffering would conduct

---

<sup>215</sup> Gethin, *The Foundations of Buddhism*. 84.

<sup>216</sup> Gethin mentions that some researchers have proposed that the time in which Buddha delivered his message was particularly hard for a majority of people, so his message about the universality of suffering found wide appeal. Ibid. 62 – 63. Whether or not this is the case, it is true that the experience of suffering is a common one across humanity, and that universality contributes to the appeal of the Buddha’s message. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 66. Carrithers, *Buddha: A Very Short Introduction*. Both of these authors point to the urban, upper middle-class circumstances of many of the Buddha’s early followers, and characterise the goal of *nibbāna* as appealing to a world-weary intelligentsia.

<sup>217</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 75.

<sup>218</sup> “Strictly then the noble eightfold path represents the end of Buddhist practice; it is the way of living achieved by Buddhist saints - the stream attainers, once-returners, non-returners, arhats, and bodhisattvas who have worked on and gradually perfected view, intention, speech, conduct, livelihood, effort, mindfulness and concentration...” Gethin, *The Foundations of Buddhism*. 83.

themselves, and patterns of behaviours and thoughts that those individuals display.

It is held that individuals cannot just will themselves to behave in this way, but instead have to struggle continually through many existences to realise these patterns of behaviour. “He cannot, as it were, simply open the door and set out on the noble eightfold path, first he must negotiate the jungle of his views, behaviour and emotions in order to find the eight qualities.”<sup>219</sup> That is, there are certain psychological changes which must occur before the path can be found. Thus individuals are enjoined to strive for the alteration of the way they think, so that it is in line with the goals of the tradition. The tradition encourages individuals to strive to change their own psychology therefore also changing their perception of the relative costs and benefits of action.

In accordance with the fourth noble truth, individuals are presented with the opportunity to achieve the cessation of suffering, through a course of action that requires alterations to behaviours, thoughts and action. Buddhist texts present the path that ends in the cessation of suffering as a gradual and cumulative process involving a hierarchical progression of practice, beginning with generosity (*dāna*) moving on to good conduct (*sīla/sīla*), meditative concentration (*samādhi*), and wisdom (*prajñā/paññā*).<sup>220</sup>

As I will show, this progression of practice involves the cultivation of behaviours that creates cooperative groups around the celibate Saṅgha, thus allowing selection to act at the level of the local religious community.

As an ideal, all Buddhists are enjoined to cultivate attitudes of loving kindness,

---

<sup>219</sup> Ibid. 164.

<sup>220</sup> Ibid. 83.

wisdom and non-attachment.<sup>221</sup> If individuals perfectly realise these attitudes, then there is no need to observe the precepts as such because their behaviours cannot fall outside of those precepts. However, it is held that for the vast majority of individuals whether lay or monastic, such realisation is not a possibility. Instead, individuals seek to progress along the path (and therefore come closer to the perfect realisation of these attitudes) through observance of the appropriate precepts.

To recap, before moving on to examine the concept of *kamma* in more detail, the four noble truths form a central part of Buddhist doctrine and are shaped to engage individuals and then to promote cooperative behaviours. The first noble truth bases the doctrine on an observable reality, and provides a platform for the other truths. The second truth, that suffering is caused by craving, again reinforces the apparent truth of the doctrine by stating an essential human experience – people desire a wide and constant range of things. Desire promotes action, and action has consequences (as I explore next when I discuss *kamma*). These consequences are motivational, and promote cooperative behaviours by offering incentives for cooperative behaviour, and disincentives for non-cooperative behaviour. The third noble truth increases the appeal of embracing the doctrine generally because it states that there is an escape from the cycle of rebirth which most Buddhists accept exists. Finally, the fourth noble truth states that the path laid out within Buddhism is that escape, providing further motivation for acceptance of the Buddhist doctrine. These basic tenets thus go some way to increasing the likelihood that individuals will accept the doctrine and change their behaviours in accordance

---

<sup>221</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 95.

with it. Combined with an acceptance of the concept of *kamma* they form a powerful motivational tool within the doctrine.

### ***Kamma***

In religions shaped through CGS, we would expect to see mechanisms promoting co-operative behaviour and punishing selfish tendencies. The doctrine of *kamma* fulfils this expectation. It is inherently related to the continued cooperation that exists between the laity and the Saṅgha, within the laity, and within the Saṅgha. The doctrine of *kamma* appears to be so crucial in motivating certain behaviours that as Matthews observes: “...the doctrine of karma might turn out to be one of the most powerful political and economic incentives the history of religion has known...”<sup>222</sup> In this section, I will break down how the doctrine of *kamma* motivates cooperative behaviors, looking at the doctrine generally, before turning to consider the ideas of bad *kamma* and good *kamma*, and the different but specific behaviours each can bring about.

In the second noble truth, the truth of the cause of suffering, we find the roots of how the doctrine of *kamma* motivates cooperative action. Suffering, it is held, is caused by *taṇhā* (translated often as “craving” or “desire”).<sup>223</sup> In Buddhist folk psychology “the suggestion is that deep in the minds of beings there is a greed or desire that manifests as an unquenchable thirst which is the principal condition for the arising of suffering.”<sup>224</sup> Without getting into elaborate discussions of doctrinal detail, it is held that craving leads to *kamma*,

---

<sup>222</sup> Ronald W. Neufeldt, ed. *Karma and Rebirth* (Albany: State University of New York, 1986). 136.

<sup>223</sup> In using the terms desire or craving as a translation for *taṇhā*, I take my lead from Gethin who states: “I have translated the word *trṣṇā* (Pali *taṇhā*) as ‘thirst’. This is a literal meaning, but in the present context it is a figurative word for strong desire or craving...” Gethin, *The Foundations of Buddhism*. 70.

<sup>224</sup> Ibid. 70.

and, further, that “every volitional act (*kamma*), if instigated by desire, produces an appropriate consequence, desirable or undesirable, for the actor.”<sup>225</sup> Consequences of *kamma* involve both physical and material rewards or punishments in the current life as well as in the next life. These consequences are inevitable. In his book tracking the earliest development in Buddhist concepts of *kamma*, McDermott states that:

Human actions are held to generate a force which is motive power behind the round of rebirths and deaths that must be endured by the individual until he has attained liberation. Thus in this or some future existence, man becomes heir to his own deeds. This, in short, is the doctrine of karma.<sup>226</sup>

*Kamma* is regarded as a universal fact – so all individuals have the opportunity to affect the circumstances in their future existence through committing certain actions.<sup>227</sup> While all forms of *kamma* are ultimately an impairment to the achievement of *nibbāna*, since the vast majority of committed Buddhists cannot hope to achieve *nibbāna* in this existence, the potential for *kamma* to make this (or the inevitable future existences) more or less pleasant is relevant.<sup>228</sup>

Although pursuit of good *kamma* was never in the final analysis sufficient for salvation (A.5.262)...consistent with the Buddha’s understanding that each individual responds according to the spiritual level of development (*upāya*), the doctrine of *kamma* was seen as crucial for the average person’s religious vocation... *Nibbāna* was not necessarily a pessimistic goal, but for the ordinary villager it was not as

---

<sup>225</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 42.

<sup>226</sup> James P. McDermott, *Development in the Early Buddhist Concept of Kamma/Karma* (New Delhi: Munshiram Manoharlal, 1984). 1.

<sup>227</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 43 -43, Gethin, *The Foundations of Buddhism*. 119.

<sup>228</sup> For a thorough discussion of the tensions between these various goals within Buddhist tradition, see Spiro’s discussion in Chapters 2 – 5. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*.



meaningful as continued rebirth, governed by *kamma*, in superior states of worldly or heavenly existence.<sup>229</sup>

The Buddha's message as a whole is held by many believers to offer a means not only to ending suffering, but to bringing about pleasant results in this life and the next, on the way to the final cessation of suffering.<sup>230</sup> Egge argues that *kammic* theory allowed the goal of *nibbāna* to be integrated with the desire of the majority to achieve better circumstances in this life. As he puts it:

The karmic discourse addresses both problems by positing that the path to *nirvāṇa* extends over numerous lifetimes, and allows both householders and monastics to progress toward their ultimate salvation while enjoying countless pleasant rebirths along the way.<sup>231</sup>

Whether individuals desire *Nibbāna* or a more pleasurable existence (and as I have pointed out, many do not see these two goals as discontinuous),<sup>232</sup> commitment to Buddhism, and its central doctrine of *kamma*, leads them to strive to live according to the Buddha's teaching.

For the majority of Buddhists, following the Buddha's teaching involves several steps for changing behaviours. The first step is to develop generosity, which is followed by the development good conduct and finally, the development of meditative practice. Here, I focus on these first two steps, as meditative

---

<sup>229</sup> Matthews, "Post-Classical Developments in the Concepts of Karma and Rebirth in Theravada Buddhism." 125.

<sup>230</sup> Though *kamma* is not explicitly mentioned in the four noble truths (Neufeldt, ed. *Karma and Rebirth*. 207) it is amalgamated with them to form a coherent system of thought. For further discussion, see Collins, *Nirvana and Other Buddhist Felicities*

<sup>231</sup> Egge, *Religious Giving and the Invention of Karma in Theravada Buddhism*. 61.

<sup>232</sup> Desire for *Nibbāna*, though ultimately also an impediment to the relinquishment of all desire, is not viewed as negatively, as it can lead individuals to pursue the spiritual discipline necessary to bring themselves closer to the Path, which will eventually lead them to relinquish their attachment to pleasure. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 69 – 70.

practice is not as commonly pursued within the tradition.<sup>233</sup> For many Buddhists, spiritual development is limited to a focus on generosity and good conduct, characterised as the early stages of the Path.<sup>234</sup> Ethical action is the necessary foundation for the pursuit of *nibbāna*, and the later stages of realisation cannot be achieved without having mastered such action. Thus anyone who wants to progress within Buddhist practice has motivation to live as ethically as possible.<sup>235</sup> Ethical action explicitly involves adhering to group cooperative norms. The consequences of *kamma* reward such adherence, and punishes those who do not observe it.<sup>236</sup>

The concept of *kamma* is understood to play a key role in the broad appeal and adherence to Buddhist tradition.<sup>237</sup> The *kammatic* focus of doctrine motivates lay individuals to behave in accordance with the tradition. The doctrine of

---

<sup>233</sup> Wider interpretations of meditative practice include common devotional acts as well as more focused study, because such acts are seen as stilling the mind and preparing it for meditative practice. Gethin, *The Foundations of Buddhism*. 179. However, here I refer directly to the focused pursuit of meditative practice.

<sup>234</sup> “According to this kind of scheme, the early stages of practice are more concerned with establishing good conduct on the basis of ethical precepts; these provide the firm foundation for the development of concentration, which in turn prepares for the perfection of understanding and wisdom...” Ibid. 83. I am not here overlooking those that hold that acts of generosity, devotion and moral conduct pave the way for development of mind that might be said to be the precursor of ideal meditative states. As Gethin describes it: “The psychological understanding that underlies this is not hard to see. In order to see the four truths, the mind must be clear and still; in order to be still, the mind must be content; in order to be content, the mind must be free from remorse and guilt. In order to be free from remorse and guilt, one needs a clear conscience; the bases of a clear conscience are generosity and good conduct.” —, *The Foundations of Buddhism*. 179. I will, for the sake of brevity and focus, put the discussion of meditation, and its likely psychological effects to one side. For brief discussion, see —, *The Foundations of Buddhism*. 179.

<sup>235</sup> One exception to this is those who hold that certain types of meditative practice can sidestep the need to behave ethically because its capacity to produce good merit. See brief discussion by Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*., n 6, 96.

<sup>236</sup> Gethin, *The Foundations of Buddhism*. 169 – 174.

<sup>237</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. Chapter 4; Egge, *Religious Giving and the Invention of Karma in Theravada Buddhism*. 61 – 63.

*kamma* adds consequences to action which cannot necessarily be predicted by the immediate or material circumstances resulting from those actions.<sup>238</sup> When assessing the likely effect of a course of action, individuals must also consider ramifications they cannot necessarily observe, and that do not follow on immediately in this life or even in this world.<sup>239</sup>

As a design for altering behaviours, the doctrine of *kamma* strikes not just at behaviours themselves, but at the will which causes individuals to behave. Though *kamma* is action that follows from intention or desire, the impetus for change is directed at the start of the process as well at the action itself. It is held that volitional thought and desire lead to *kamma*, and so the intentions of individuals matter as well as their actions within this schema.<sup>240</sup> The doctrine of *kamma* encourages individuals to continuously pursue ways of controlling their desires.

The doctrine of *kamma* does not detail the consequences of all possible action. However, this incompleteness contributes to the doctrine's effectiveness at

---

<sup>238</sup> There are schedules of attendant consequences which result from certain actions, but many of these are vague or imprecise. For brief discussion see Gethin, *The Foundations of Buddhism*. 120 – 121.

<sup>239</sup> As pointed to earlier, within Buddhist cosmology there are several different planes of existence an individual can be born into, ranging from animal hells, to ghost realms, to several blissful heaven realms. To be born in the human realm is considered particularly fortuitous because it affords the greatest opportunities for working through past *kamma* and progressing towards nibbāna. See Ibid. 120 – 122; McDermott, *Development in the Early Buddhist Concept of Kamma/Karma*. 5 – 6; Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 42 – 44, 67 n 4.

<sup>240</sup> “...Karma was understood to be more than just acts and deeds in anyone life. It was above all the volition (*cetanā*, M.3.207) that stood behind those deeds...” Matthews, “Post-Classical Developments in the Concepts of Karma and Rebirth in Theravada Buddhism.” 123; Also Gethin, *The Foundations of Buddhism*. 129.

maintaining cooperative action.<sup>241</sup> Textual contradictions and imprecision in teachings regarding the specific effects of *kamma* promote cooperative action. Imprecision allows a flexible theodicy to develop – the occurrence of any negative events can be attributed to past *kamma*, motivating the individuals' desire to attain better *kamma* in order to avoid such circumstances in the future.<sup>242</sup>

For the poor, then, their misery is not caused by the exploitation of the rich, nor by the injustice of the social system, but by their own neglect to offer charity their former lives, for which they are to blame. Hence there is no point – and it is impious – to rage against the system or those who possess wealth. Rather it is both pious and more effective to remedy the situation in the future through one's own efforts in this one – offering more *dāna*. What better ideology and attitude could one have to assure the stability of the socioeconomic order?<sup>243</sup>

The doctrine of *kamma* motivates acceptance of current circumstances, without hampering the impulse to strive for better circumstances in the future.<sup>244</sup> The doctrine of *kamma* has been described by Weber as “the most complete formal solution of the problem of theodicy...”<sup>245</sup> Acceptance of the status quo is therefore encouraged. In many Buddhist countries, the status quo has included a markedly wealthy Saṅgha, supported consistently by the laity.

The flexibility of the doctrine of *kamma* also means that it can co-exist with

---

<sup>241</sup> While there are several treatises discussing the likely effects of *kamma* on rebirth, there are many mitigating factors which can dictate individual circumstances, and thus it is not held that *kamma* can be neatly predicted or relied on. Matthews, "Post-Classical Developments in the Concepts of Karma and Rebirth in Theravada Buddhism.", 131 – 137.

<sup>242</sup> Spiro discusses how the poorest Burmese villagers readily attribute their impoverished situation to actions in a previous existence, and notes that this motivates their continued cooperative behaviours in this existence. Spiro, 444.

<sup>243</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 446.

<sup>244</sup> Matthews, "Post-Classical Developments in the Concepts of Karma and Rebirth in Theravada Buddhism." 123; Spiro 135 – 137.

<sup>245</sup> Cited in Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 135.

other beliefs and cultural norms which people may hold. As Matthews describes it:

The spirits (*yak* in Sinhalese, *nat* in Burmese, *phi* in Thai ) are widely propitiated by all social classes throughout the Theravadā world...If they in turn come to symbolise retribution or reward, it is not because they have the power to interfere with karma. The spirits can only do harm if there has been bad karma accumulated in the past. Thus they operate within the law of karma and become in effect agents of karma by helping to dispense the appropriate karmic justice as it comes due. The point to note is the continued power of karma in folk culture and village-level Buddhism.<sup>246</sup>

The doctrine of *kamma* describes a law of cause and effect that transcends local traditions, without demanding their disestablishment. It can accommodate other supernatural schemas without being inherently challenged. This means that the doctrine of *kamma*, a central plank of Buddhism, can be adopted within new cultural communities the tradition might spread to. It is exactly the sort of design we would expect to see in a tradition subject to cultural selection. This, combined with the other features of the doctrine just discussed, promote the survival of cooperative behaviours within the tradition.

Many basic features of the doctrine of *kamma* build the foundation for the coordination of cooperative behaviour. I have shown that consequences of action are emphasised, and that these consequences are held to extend beyond this life, into possible future existences. I have argued that this is likely to effect individuals' assessments of the costs and benefits of actions, promoting cooperative behaviours. I also pointed to the fact that *kamma* is held to emerge from desires and intentions, so individuals who adhere to the tradition are

---

<sup>246</sup> Matthews, "Post-Classical Developments in the Concepts of Karma and Rebirth in Theravada Buddhism." 136.

encouraged to alter their own desires, in order to bring about more desirable action. As I turn to discuss next, more desirable action is action which facilitates cooperative groups, both within the Saṅgha and within the lay communities. I ended this section by looking at how the fact that the doctrine of *kamma* does not specify the exact consequences of every action allows a flexible theodicy to be maintained amongst committed adherents, while not stifling urges to achieve better conditions in future existences. I also argued that the lack of specificity within the doctrine allowed Buddhism to co-exist with pre-existent cultural beliefs and social norms. All of these basic features of the doctrine promote cooperative behaviours.

This will become clearer as I now turn to discuss the specific pieces of the doctrine of *kamma* which pull the whole together into an efficient and consistent means to produce cooperation. Throughout the next section I look at specific parts of the doctrine of *kamma* and their potential effect on behaviours. Bad actions (and thoughts), as bad *kamma*, are held to bring pain, poverty, hell and animal existences, while good *kamma* results in material rewards, happiness, wealth and an easy life.<sup>247</sup> In the doctrine of *kamma* we find a tradition which both pulls individuals toward cooperative behaviour by providing incentives for that behaviour, while simultaneously pushing individuals away from non-cooperative behaviour, by making it explicit that such behaviour brings unpleasant experience.

---

<sup>247</sup> Egge, *Religious Giving and the Invention of Karma in Theravada Buddhism*. 42 – 47; Matthews, "Post-Classical Developments in the Concepts of Karma and Rebirth in Theravada Buddhism." 129; Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vicissitudes*. 69.

### *Bad kamma*

Following his case work in Burma in the mid-twentieth century, Spiro observed that “...the fear of karmic retribution for violation of the Buddhist moral code is undoubtedly the most important agent of social control in Burma.”<sup>248</sup> This observation reflects how common understandings of bad *kamma* contribute to social cooperation within Buddhist communities. There are several ways that these understandings of bad *kamma* discourage non-cooperative behaviours, as we will see. Further, it can induce individuals to act in ways which do not maximise relative fitness in the short term, through an alteration of the perceived costs and benefits associated with individual action. I explore how the concept of bad *kamma* motivates group cooperative behaviours within the laity, between the laity and Saṅgha, and within the Saṅgha itself, and also contributes to the maintenance of the Saṅgha as celibate. Also, I argue that a *bhikkhu*’s perceived bad *kamma* may impact the laity’s willing maintenance of the Saṅgha. I argue that the concept of bad *kamma* sidesteps some of the problems inherent in many punishment systems. I finish this section by considering the ways fear of the accumulation of bad *kamma* maintains the fidelity of cultural information within the tradition, increasing the chances of the replication and spread of Buddhism.

Actions which are held to earn bad *kamma* constitute a list of behaviours detrimental to cooperation, within the Saṅgha, between the Saṅgha and the laity, and also within the lay community. Violation of the basic moral goods within Buddhism is believed to bring bad *kamma*.<sup>249</sup> For the laity, this includes any thought or intention and subsequent action violating the five precepts, so

---

<sup>248</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 450.

<sup>249</sup> Ibid. 42, 44 – 47; Gethin, *The Foundations of Buddhism*. 120, 172.

anything that involves killing, stealing, taking intoxicants, wrong speech or sexual misconduct.<sup>250</sup> As Gethin describes, the actions held to result in bad *kamma* are those which are not amenable to cohesive and cooperative social relationships:

The kinds of behaviour that the five precepts are intended to prevent one from committing are outlined by the list of ten courses of unwholesome action: harming living creatures, taking what is not given, sexual misconduct, false speech, divisive speech, harsh speech, frivolous speech, covetousness, anger, and wrong view. In these ten actions – three of body, four of speech and three of thought – we find speech further elaborated, while the particular emphasis on actions of thought and the mind draws attention once again to the Buddhist focus on karma as essentially a matter of mind and intention: what is important is one's state of mind...<sup>251</sup>

In the courses of unwholesome action, we again find emphasis put on individual responsibility for changing thought and intention in order to avoid negative action. We also find moral norms common across many cultural traditions.

As I pointed to previously, in adhering to the five precepts (and therefore avoiding bad *kamma* where possible), individuals are held to be progressing along a path leading eventually to *nibbāna*.<sup>252</sup> Within the tradition, though, it is recognised that the path is long and arduous and we cannot hope to follow it perfectly. Individuals are enjoined to do as well as they can, in order to progress.<sup>253</sup> This emphasis on continual individual cultivation of an ethical life encourages avoidance of bad *kamma*, as well as the desire to become a *bhikkhu* if

---

<sup>250</sup> Gethin, *The Foundations of Buddhism*. 170 – 173.

<sup>251</sup> Ibid. 171.

<sup>252</sup> Ibid. 172.

<sup>253</sup> Ibid.



at all possible, or to support *bhikkhu* if it is not possible to become one.

*Bhikkhu* undertake more precepts than laity, and therefore also undertake a greater commitment to avoid bad *kamma*. They commit to living according to ten precepts. These additional precepts include the five that laity observe plus some: they are to avoid all sexual relations (not just improper ones), they do not eat after noon, they are not to watch or perform in any form of theatrical entertainment, they are not to wear perfume or jewellery, or any other facial or body adornment, they are not to sleep on a high or elaborate bed and they are not allowed to handle money.<sup>254</sup> *Bhikkhu* are committed to trying to avoid all forms of *kamma* as they strive to live the Dhamma, and so are motivated to observe precepts. The additional precepts that *bhikkhu* observe serve to separate them from the lay community. Forbidden to eat with others, to decorate themselves with any symbols of worldly success, to interact in any economic way, to have sexual relations, or to participate in community theatrical festivals or performances, *bhikkhu* are separated from the lay society they rely upon. They are also rendered entirely dependent upon the lay communities around them.

Both the Saṅgha's separation and its dependency supports my thesis that the shape of Buddhism promotes whole Buddhist groups as a level of selection by marking at least two separate but mutually dependent parts within Buddhist groups. If, as I proposed in the previous chapter, cooperative behaviour is enhanced through this partite structure, then the Saṅgha's desire to avoid bad *kamma* facilitates cooperative behaviour.

---

<sup>254</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 46.

*Kammic* consequences that *bhikkhu* believe follow on from being sexually active help to maintain the Saṅgha as a cohesive, celibate group. Spiro cites fear of such consequences as one of the important reasons that monks observe their commitment to celibacy: “An unchaste monk will be punished in hell for sexual derelictions.”<sup>255</sup> Spiro goes on in the same passage to discuss other reasons for their observation, pointing to the *bhikkhu*’s fear of being ejected from the Saṅgha (should he be sexually active) and the emphatic social disapproval that would attend lay discovery of *bhikkhu*’s sexual infidelity.<sup>256</sup> This fear of social judgement foreshadows the discussion in the next section - a *bhikkhu* who lives in a way that accumulates bad *kamma* is not a productive ‘field of merit’ for the laity and therefore threatens the laity’s support of the *bhikkhu*. Without this support, the Saṅgha could not exist in its most common form. Thus, there are institutional and individual imperatives for *bhikkhu* to avoid bad *kamma*.

The functionality of the doctrine of bad *kamma* can also be found in the way the fear of bad *kamma* protects the transmission of the Buddhist tradition, therefore securing the group level adaptive benefits I have proposed. Two particular types of action, wrong view and doubt, regarded as bad *kamma*, protect the fidelity of the tradition.

Wrong view is one of the ten courses of unwholesome action.<sup>257</sup> As McDermott describes it in his consideration of the Nikāyas (which discuss the views held to be wrong): “A variety of non-Buddhist speculations and doctrines are placed in the category...those views which are directly counter to the teachings of the Buddha. These lead away from his middle path and hence to the accumulation

---

<sup>255</sup> Ibid. 368.

<sup>256</sup> Ibid. 368.

<sup>257</sup> Gethin, *The Foundations of Buddhism*. 120.

of bad *kamma*.”<sup>258</sup> Emphasising alternative cultural traditions as leading to bad *kamma* discourages the infiltration of other cultural information within the tradition, and contributes to continued fidelity. If we consider Buddhism as a cultural tradition in competition with other cultural traditions for transmission and perpetuation, then categorising ‘wrong views’ as bad *kamma* is explicitly functional: it discourages individuals from straying outside of the tradition.

The prohibition against wrong views looks anomalous when we consider the leniency with which doctrinal disagreement is generally treated within the Saṅgha.<sup>259</sup> However, it reflects nuanced design - the semblance of tolerance and diversity remains, but without the threat to the perpetuation of crucial design elements within the tradition, such as the negative consequences of bad *kamma*, the positive consequences of good *kamma*, and the doctrine of the non-existence of self. If cultural traditions are comprised of patterns of information represented by individuals, then controlling the parameters of that information would act to ensure fidelity in the pattern, while still allowing enough flexibility for the doctrine to be fit to personal circumstances and interests. The crucial tenets of the tradition necessary for the realignment of perceived costs and benefits of action are secured, regardless of the other cultural information within the environment.

Faith is valued within the tradition, which encourages committed individuals to trust in the truth of the Buddha’s message, whether or not they can verify it

---

<sup>258</sup> McDermott, *Development in the Early Buddhist Concept of Kamma/Karma*.

<sup>259</sup> I return to discuss this in more detail in the next section, when I consider the discipline which maintains and perpetuates the Saṅgha.

themselves.<sup>260</sup> Doubt is understood as one of the ten fetters that bind individuals to *saṃsāra*.<sup>261</sup> Commitment to the teaching (and cooperative behaviour emerging from that commitment) is emphasised over evidence of the senses. Thus the presentation of the costs and benefits of action within the tradition is to be trusted, regardless of assessments based on individual observation alone.

Punishment presents a second order public goods dilemma. That is, punishment is effective at securing cooperative behaviour amongst a group of individuals,<sup>262</sup> but to punish costs time and energy, and therefore individuals who enjoy the benefits of punishment without punishing themselves are favoured by selection.<sup>263</sup> The doctrine of bad *kamma* offers a solution to this problem. As Collins observes:

Physical coercion applied in the here and now cannot – apart from the extreme and ungeneralizable case of torture – determine what people think and certainly not what ideas and aspirations to wisdom and happiness they might entertain. This, on the contrary, is the clerics’ forte...They can...elaborate visions of the punishments which await those who do not follow their rules, an activity to which traditional Buddhists devoted themselves with every bit as much enthusiasm as medieval Christians.<sup>264</sup>

---

<sup>260</sup> Gethin discuss the different types of faith, and reiterates the argument that Buddhist traditions do induce and approve of affective faith as “a positive emotional response to something that someone has heard or read.” Gethin, *The Foundations of Buddhism*. 167. Such emotional responses to repeated religious behaviours contribute to the perpetuation of those behaviours.

<sup>261</sup> Ibid. 73.

<sup>262</sup> Robert Boyd and Peter J. Richerson, "Punishment Allows the Evolution of Cooperation (or Anything Else) in Sizable Groups," *Ethology and Sociobiology* :(1992) 13(1992).

<sup>263</sup> For a brief discussion see Sober and Wilson, *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. 142 – 149, also R. Boyd and P. J. Richerson, "Solving the Puzzle of Human Cooperation," in *Evolution and Culture*, ed. S. Levinson (Cambridge: MIT Press, 2005). 10 – 12.

<sup>264</sup> Collins, *Nirvana and Other Buddhist Felicities* 21.

The consequences of bad *kamma* are not understood as a punishment as such. Rather, they are inevitably results.<sup>265</sup> While the doctrine of bad *kamma*, like punishment, provides a deterrent to action, it sidesteps many of the problems that occur with human-delivered punishments. Justice, in the form of the consequences of *kamma*, is believed to be an inevitable property of existence.<sup>266</sup> There is consistency in the accumulation of bad *kamma*, meaning all individuals, regardless of familial status or social position, will suffer the consequences of their actions in equal measure.<sup>267</sup> Further, the costs of actually punishing do not have to be borne by any one individual.

The doctrine of bad *kamma* is instrumental in motivating observation of the moral precepts within Buddhism. Its attendant concept, demerit, contributes to the motivational power it has.<sup>268</sup> As Spiro puts it in his description of the Burmese desire to avoid bad *kamma*: “The main Burmese motivation for complying with the Buddhist precepts is not so much expectation of merit as reward for compliance as it is of demerit as punishment for non-compliance.”<sup>269</sup>

This is not to overlook the fact that within all Buddhist cultural traditions there are also actual punishments for social and religious transgressions delivered by other humans. As we will see, the Saṅgha includes a carefully detailed punishment schedule which applies to *bhikkhu* who do not behave

---

<sup>265</sup> Though individuals do not necessarily agree on how much bad *kamma* accumulates from which actions, or even how that *kamma* accumulates following the action. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 100 – 103.

<sup>266</sup> Ibid. 43 – 44.

<sup>267</sup> Ibid. 438 – 441.

<sup>268</sup> I discuss merit and its relationship to *kamma* more thoroughly in the next chapter.

<sup>269</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 99.

appropriately. Social ostracism and approbation also play a role in censuring abhorrent behaviour. However, the doctrine of *kamma* underlies and perpetuates commonly accepted social norms within Buddhist societies and therefore its role in maintaining cooperative self-discipline cannot be ignored. The consequences of bad *kamma* are held to outstrip consequences of social approbation and ostracism that can be visited on individuals by their social peers.<sup>270</sup> Though local *bhikkhu* may ‘turn over their bowls’ and refuse to collect alms from particularly impious lay people,<sup>271</sup> even the reputation and social disapproval that follow this does not compare to writhing in the searing pain of hell, or time spent as a hungry ghost which might result from harming the Saṅgha.<sup>272</sup>

In Burma, the primary motivational basis for belief in the neutralisation of demerit is the desire, specifically, to escape the punishment of hell, or at least to reduce its duration and/or intensity.<sup>273</sup>

Though bad *kamma* is not the only means through which non-cooperative behaviour is prevented within Buddhist religious groups, it removes some of the need for punishment by providing psychological motivation to obey moral norms.<sup>274</sup> The doctrine of bad *kamma* promotes cooperation across the Buddhist

---

<sup>270</sup> Ibid. 449.

<sup>271</sup> “If a monk strongly disapproves of the behaviour of a layman, his most punitive recourse – one which is almost never exercised – is to invert his bowl when passing the latter’s home on his alms-round.” Ibid. 410. In inverting his bowl, a *bhikkhu* denies the layman an opportunity to generate merit through giving to the Saṅgha, and publically indicates disapproval with the behaviour of the individual.

<sup>272</sup> Egge discusses one narrative that records such penalties for individuals who wrong the Saṅgha or the Buddha. Egge, *Religious Giving and the Invention of Karma in Theravada Buddhism*. 110.

<sup>273</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissittudes*. 121.

<sup>274</sup> Ibid. 447 – 449, though as Spiro notes, individuals accept that part of being ‘in the world’ (i.e. not within the Saṅgha) entails some bad *kamma* and its inevitable consequences. —, *Buddhism and Society: A Great Tradition and Its Burmese Vissittudes*. 449 – 450.

communities, and it contributes to the maintenance of a separation between the laity and the Saṅgha. Descriptions of the unpleasant and long lasting consequences of bad *kamma* promote common norms of behaviour across the community, and minimise the need for punishment within these communities. In short, the doctrine of bad *kamma* is functional because it is causally linked to behaviours (within the laity and within the Saṅgha) which make Buddhist communities more likely to be subject to selection as a whole, albeit a divided whole.

### **Good *kamma***

The doctrine of *kamma* does not just restrict non-cooperative behaviours, but it also motivates cooperative behaviours. The idea of good *kamma* is a crucial piece of the wider doctrine of *kamma*, and key to inspiring and maintaining cooperative behaviours. In order to show the role that good *kamma* has in contributing to cooperative behaviours, I will briefly consider the different ways good *kamma* is thought to be accumulated. As mentioned perviously, there are three ways to good *kamma* – giving, moral behaviour and meditation.<sup>275</sup> While all three potentially have important implications for cooperative behaviours within communities, there is not room here for any consideration of the motivational effects of meditation on cooperative behaviour.<sup>276</sup> Instead, I discuss moral behaviours before ending this section by introducing the importance of giving. Understanding how the doctrine of good

---

<sup>275</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 94, 97.

<sup>276</sup> I will note, though, that some research has been done on the cognitive effects of regular meditative practice. Whether those changes are conducive to cooperative behaviour or not cannot be decided here. But if it can be shown that those cognitive changes are amenable to facilitating the sorts of sacrifices necessary to maintain cooperative behaviour, then such research bears consideration in future discussions.

*kamma* motivates cooperative behaviours and why those cooperative behaviours are group beneficial requires a discussion of the relationship between good *kamma* and merit, which I lay out in the next section.

As I observed in the previous discussion of bad *kamma*, commonly held moral norms are laid out in precepts committed individuals are expected to follow, in accordance with their level of commitment. Observance of these precepts involves restraint from certain behaviours, and this restraint is held to lead to an accumulation of good *kamma*. Since the accumulation of good *kamma* is held as a goal by committed Buddhists, behaviour in accordance with the precepts is made more likely.

I have argued the individual assessment of the costs and benefits of action is directly related to the production of cooperative action within Buddhism. In some respects good *kamma* mirrors bad *kamma* – that is, just as the consequences of bad *kamma* function in some ways as punishment for bad behaviours, the consequences of good *kamma* can be understood as a reward for good behaviours. However, it is not clear within the tradition exactly how to assess the attendant consequences of good *kamma* earned by refraining from potential actions.<sup>277</sup> If the maintenance of cooperative behaviour relies on the individual assessing such behaviour as more beneficial than costly, then such ambiguity seems puzzling. This, coupled with the fact that obeying moral norms involves acting in ways people may find challenging or unpleasant or even impossible, means that while the emphasis on moral behaviours as a means of good *kamma* is motivational, it cannot explain all of its motivational power. The consequences of good *kamma* are held to reward those who attempt

---

<sup>277</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 103 - 106



to live according to the ideal represented by the Buddha. But it is also recognised that for those living the lay life (and even for many members of the Saṅgha) this ideal is impossible to achieve.<sup>278</sup>

Rather than leading to despair, though, this acknowledgement of the fallibility of the behaviour of the vast majority of individuals provides incentive for giving (*dāna*) to virtuous individuals as good *kamma* and as a means to earn merit.<sup>279</sup> The most common form of good *kamma*, giving, is open to everyone regardless of their moral behaviours. While Buddhists understand the avoidance of immoral action as the best means of avoiding bad *kamma*, giving is the best type of good *kamma*. In the Buddhist context, *dāna* is held to refer generally only to giving to religious causes, i.e. the support of monks or the sponsorship of a celebration.<sup>280</sup>

Since some degree of precept violation is held to be inevitable for the average human, and everyone is motivated to counter such inescapable sources of bad *kamma*, fear of bad *kamma* also motivates *dāna*. As Spiro observed in Burma: “...one of the major motivations to the Burmese is to accumulate sufficient merit by other means – especially by giving – to compensate for the demerit accumulated through a violation of...precepts.”<sup>281</sup> The desire for good *kamma*, coupled with the fear of bad *kamma*, motivates giving behaviours centrally

---

<sup>278</sup> Spiro discuss this in a Burmese context (Ibid. 98 – 99.) while Neufeldt cites a Tibetan lay understanding of good *kamma*, and the difficulties inherent therein (Neufeldt, ed. *Karma and Rebirth*. 179).

<sup>279</sup> As Dargyay observes: “This dilemma – the command to accumulate merit on one side and the inability to practice Buddhist ethics on the other – is resolved by supplying opportunities exclusively devoted to the task of enabling the laity to accumulate merit.” Lobsang Dargyay, “Tsong-Kha-Pa's Concept of Karma,” in *Karma and Rebirth: Post-Classical Developments*, ed. Ronald Neufeldt (Albany: State University of New York Press, 1986). 180.

<sup>280</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 109

<sup>281</sup> Ibid. 103.

important to the maintenance of the Saṅgha.

### *Merit*

Lay understandings of merit, its causes and its effects are also closely aligned with the prevalence of giving behaviours within Buddhist communities. The laity views the Saṅgha as a repository of good merit available to be tapped through their giving activities. I will explore this here, as well as how it motivates lay cooperative behaviours, before ending the section with a discussion of how celibacy relates to lay understandings of the Saṅgha as a 'field of merit'. I argue that cooperation within the laity and between the laity and the Saṅgha is directly tied to the genetic sacrifice of the *bhikkhu*.

This discussion is premised on the assumption that individuals constantly weigh up and assess the likely costs and benefits of action. Such routine considerations are not necessarily fully conscious, but conscious consideration of the benefits and costs of behaving in accordance with the Buddhists precepts also occurs, and behaving in accordance with them offers the most apparently rational choice because of the merit it accrues.

To return, however, to strictly cognitive variables, we may conclude that, given his acceptance of Buddhist soteriology and the more general world view from which it is derived, the preference of the *individual* Burman for religious over secular investments represents the more rational decision.<sup>282</sup>

Individuals refrain from non-cooperative actions because the consequences of bad *kamma* outweigh any material rewards they might make, and they give

---

<sup>282</sup> Ibid. 463.

because of the merit.<sup>283</sup> In Burma, it is common to use ‘merit books’ to keep account of how much good merit they have earned.<sup>284</sup>

Merit is understood as a consequence of action, which influences the conditions of existence in this and future lives. While the relationship between merit and *kamma* is not unambiguous (there are several competing explanations for how *kamma* and merit exactly relate to each other), it is commonly held that both merit and *kamma* bring consequences for individuals.<sup>285</sup> As Keyes observes in his ethnographic consideration of Buddhist practice:

*Kammic* theory provides practicing Buddhists not only with a means to explain conditions that are susceptible to neither natural nor supernatural (magical) explanation or control, but also, and of at least equal importance, with an orientation for action, that is, an ethos. The *kammic* ethos finds expression in the discourse of Buddhists of the Theravādin tradition rarely under the rubric of *kamma* but more commonly in language used to speak of the quest for merit... The *kammic* theory of action centres thus on merit making.<sup>286</sup>

Actions resulting in merit are held to either mitigate accumulated bad *kamma*, or to provide beneficial effects despite accumulated bad *kamma*.<sup>287</sup> The amount of merit an individual accumulates has consequences for that person’s life or future lives.<sup>288</sup> There is a clear incentive to act in ways likely to earn merit.

---

<sup>283</sup> Ibid. 121 – 123.

<sup>284</sup> Ibid. 111.

<sup>285</sup> Spiro’s discusses several different schemas that describe the relationship between merit and *kamma*. Ibid. 114 – 123.

<sup>286</sup> Charles F. Keyes, "Merit-Transference in the Kammic Theory of Popular Theravada Buddhism," in *Karma: An Anthropological Inquiry*, ed. Charles F. Keyes and E. Valentine Daniel (Berkeley: University of California Press, 1983). 267.

<sup>287</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 120 – 121.

<sup>288</sup> “They both agree, however, that one’s destiny represents retribution for one’s own meritorious and demeritorious actions, and that this retribution is the expression of the law of (Note continues over page)

Spiro's discussion of the attitude towards merit accumulation in Burma provides clear illustration of how desire for merit can alter behaviours.

Merit is not only of great concern to the Burmese, but the acquisition of merit is, for them, the primary motivation for Buddhist action...compliance with the moral code of Buddhism, for example, most often stems from a desire to obtain merit, or conversely to avoid demerit, rather than from conscience or a consideration of its social consequences...There can be no doubt that the desire for merit is the primary basis for the practice of *dāna*, and their great concern with *dāna* is a true measure of the salience of merit in the Burmese motivational system.<sup>289</sup>

As Spiro observes, people are concerned with the consequences of their *kamma*, and they take such concerns into consideration when deciding whether to act. Merit is considered carefully, and is specifically important for motivating cooperative behaviours within Buddhist cultural groups.<sup>290</sup>

For the majority of Theravāda Buddhists throughout South and Southeast Asia, merit-making is equated with religious action. It is not that these Buddhists lack knowledge of the other modes of the path taught by the Buddha – that is, of *paññā*, “wisdom”, and *samādhi*, “mental discipline”, as well as *sīla*, “morality” – but that most people conceive of themselves as being unable to pursue these other modes of action to any significant degree.<sup>291</sup>

Obtaining the ethical ideal presented in Buddhist teaching is difficult for those individuals who have to live within the world. Merit-making is one means of countering the consequences of negative *kamma* that living in the world inherently entails, and thus individuals are motivated to pursue merit, most

---

karma, i.e., the law of moral cause and effect, by which merit is rewarded and demerit is punished.” Ibid. 115.

<sup>289</sup> Ibid. 111.

<sup>290</sup> Ibid. 111-112.

<sup>291</sup> Keyes, “Merit-Transference in the Kammic Theory of Popular Theravada Buddhism.” 267.

commonly through religious giving.<sup>292</sup>

### ***Merit and Giving***

One of the cooperative dilemmas posed by the continued existence of non-working celibate groups within a community is the support of that group. Why should a community support a removed group that does not contribute financially, material or genetically to the continued existence of the community? The lay understanding of giving as a means to earn merit provides one clue. “Giving (*dāna*) is the means, par excellence, for acquiring merit in kammatic Buddhism. When asked to list the ways in which merit can be achieved, the Burmese, almost without exception, mention *dāna* to the exclusion of anything else.”<sup>293</sup> Lay understandings of *dāna* provide motivation to give as generously as possible to the support of *bhikkhu*. As Egge describes: “...Giving produces not only merit for the next life, but rewards for this life as well. It is also written that the merit of those who supply the physical needs of monasteries grows always, day and night.”<sup>294</sup> The benefits of giving to the Saṅgha are thus presented as tangible, despite the fact they are not necessarily material.

The drive for merit accumulation alters committed individuals perception of the benefits of cooperative action. “*Dāna*, to be sure, has beneficial consequences for its recipient, but it is motivated primarily by the self-interest

---

<sup>292</sup> “When laymen were asked to name the acts which conferred the most merit, not one male and only one female mentioned any of the five precepts...In short, however the Burmese view the social and pragmatic importance of the precepts, compliance with the injunctions is not in their minds an important way to earn merit...” Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 102.

<sup>293</sup> Ibid. 103.

<sup>294</sup> Egge, *Religious Giving and the Invention of Karma in Theravada Buddhism*. 22.

of the donor.”<sup>295</sup> Giving to *bhikkhu* is not only a cooperative act of generosity, but it is also an act that the giver understands to be in their own best interest. “Giving, of course, is an important virtue, but apparently it is also (as Franklin said about honesty) the best policy to follow in serving one’s self-interest.”<sup>296</sup> Giving is a means for individuals to further their comfort, in this life and the next. Individuals give in order to help themselves. Commitment to such a position must drastically change individuals’ assessment of the costs and benefits of giving to the Saṅgha. The cost of everyday giving, such as the donation of food to passing *bhikkhu*, is balanced by the meritorious benefits for the giver. As Carrithers put it in his discussion of the role of the Buddha’s message in bringing about moral behaviour within urban communities:

We tend to think of doing good as involving the sacrifice of one’s own interest for someone else’s, but for the Buddha to do good was precisely to act in both one’s own *and* in someone else’s interest. For the monks the stress was on one’s own interest, liberation, while the means – exemplary moral discipline – incidentally achieved others interests. But this way of thought was easily turned around to apply to lay men, who by being good to others achieved the end of being good to themselves.

<sup>297</sup>

Throughout Buddhist communities, individuals and families make sacrifices that affect their genetic and material success. When we consider merit as a likely outcome of such sacrifices, the rationality of these sacrifices, despite their costs, becomes obvious. As Keyes observes in an analysis of a Thai Buddhist text:

Why should parents forego their son’s labour and renounce his sexual

---

<sup>295</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 105.

<sup>296</sup> Ibid. 105.

<sup>297</sup> Michael Carrithers, *Buddha: A Very Short Introduction* (Oxford: Oxford University Press, 2001). 88 - 89.

potential to produce heirs? Or, if a man is married, why should his wife allow her husband to end his responsibilities for supporting her and his children? Why should a master release his slave? Why should anyone seek to sponsor a person in renouncing the world, since in doing so the person so patronised would not be in a position to repay his patron with tangible benefits? The text answers these implicit questions by stressing that all those who release a man from his social obligations in order that he might become a member of the Saṅgha will receive transcendent benefits, a reward of great merit (*puñña*), thereby ensuring a decrease in suffering in the future.<sup>298</sup>

Emphasis on giving as a means to merit motivates individuals to support the Saṅgha, and makes the provisioning of *bhikkhu*'s a priority for the whole community.

The heart of Buddhist spiritual life, whether lay or monastic, is *puṇya* (Pali *puñña*). This term is usually translated as 'merit' and refers to certain kinds of action that are regarded as auspicious and potent deeds...Moreover it is the making of merit that binds the lay and monastic communities together.<sup>299</sup>

#### *Saṅgha as a field for merit*

*Dāna* is usually understood to describe giving to religious causes.<sup>300</sup> While all giving is thought to be meritorious, not all giving is thought to earn the same amount of merit.

Thus, as the Burmese put it, the feeding of a hundred dogs is the equivalent in merit to the feeding of one human being; the feeding of a hundred laymen is equivalent to the feeding of one novice; the feeding of a hundred novices is the equivalent to that of one ordinary monk; and so on.<sup>301</sup>

---

<sup>298</sup> Keyes, "Merit-Transference in the Kammic Theory of Popular Theravada Buddhism." 279, discussing a popular northern Thai text which visits the concept of merit and familial sacrifice.

<sup>299</sup> Gethin, *The Foundations of Buddhism*. 102.

<sup>300</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 109.

<sup>301</sup> *Ibid.* 109.

Such a schema encourages the laity to direct giving behaviours to the Saṅgha generally, and to the most spiritually advanced monks if possible. Gifts given to the Saṅgha are thought to generate greater amounts of merit because it is held that in renouncing the world *bhikkhu* live their lives closer to the teaching of the Buddha than laymen are able to.

Among men, those who follow the noble eightfold path are the most worthy beneficiaries. Hence, gifts to them are the most advantageous: whereas gifts given to those of wrong views, wrong actions, etc. are of little benefit to the giver...The supreme field of merit is the Saṅgha with the Buddha at its head.<sup>302</sup>

The impetus to give to those individuals who are most virtuous is driven by desire to maximise the amount of merit a gift receives. “That the lavish support of the monks is motivated by the donor’s concern for his own merit rather than the welfare of the monks is best seen in the superfluity of monastic giving...”<sup>303</sup> The more spiritually accomplished the individual that a lay person gives to, the more merit the lay person is thought to accumulate.<sup>304</sup> Understanding *dāna* as a source of merit *par excellence* alters the perceived costs and benefits of giving to such an extent that the giving behaviours of the laity become a selfish means for them to earn a tangible and desirable return.

...By accepting their alms the monk makes it possible for the villagers to acquire what they desire above all else: merit. That is why, of course, he

---

<sup>302</sup> McDermott, *Development in the Early Buddhist Concept of Kamma/Karma*. 33.

<sup>303</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 411.

<sup>304</sup> The correlation of merit earned with the virtue of a recipient has often led to paradoxical situations where *bhikkhu* who are seen as particularly dedicated (often because of their renunciation of all material things) end up with the largest amount of material goods given to them. Spiro documents the building of extra monasteries for particularly devout *bhikkhu*, which then end up sitting empty. Ibid. 411. In some ceremonies, systems of lottery assign gifts given to *bhikkhu* in order to assure that goods, such as robes and utensils, are distributed evenly across the Saṅgha. ———, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 226 – 228.



does not express gratitude to his benefactors, who receive more benefit from the giving of alms than their object. The layman is grateful to the monk for accepting them, rather than the other way around.<sup>305</sup>

Giving to the Saṅgha is thus understood as a rational path to merit. Such a doctrine creates a need amongst the laity for the Saṅgha, making Saṅgha a vital and necessary part of Buddhist communities.

Because the monk is a field of merit, no Burmese village can exist without a monastery. A village can do without electricity and tractors, without radios and a dispensary – and most villages do – but it cannot do without a monk.<sup>306</sup>

The spiritually advanced quality of the Saṅgha makes them a valuable source of merit for the laity – gifts to bhikkhu help bhikkhu live closer to the teachings of the Buddha and therefore earn merit for the giver, because the giver assists them in becoming even more virtuous. In following the path set out by the Buddha, the *bhikkhu* becomes a deep ‘field of merit’:

A worthy recipient is often called a field for merit (*puññakkhetta*). In this extended metaphor, the field is the recipient of a gift, the sower is the donor, and the seed is the gift. If the seed is planted in a good field, viz. the Buddha, an upright monastic, or the Saṅgha as a whole, it will yield great merit... a worthy recipient is an essential component of meritorious gift.<sup>307</sup>

Cooperative behaviour brought about by *dāna* hinges on the idea of the Saṅgha as a source of merit for the gifts of the laity. The Saṅgha’s perceived value as repositories of merit is found in their commitment to living according to the Buddha’s teaching, demonstrated by fidelity to their vows. The Saṅgha relies on lay support, and lay support is dependent on the spiritual purity of the Saṅgha.

---

<sup>305</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 410 – 411.

<sup>306</sup> Ibid. 410 – 411.

<sup>307</sup> Egge, *Religious Giving and the Invention of Karma in Theravada Buddhism*. 20.

As Gethin describes it: “So long as a monk lives in accordance with the basic precepts of the Vinaya, he fulfils his obligation to society and renders himself a field of merit for the laity.”<sup>308</sup> As such, there is a real societal pressure for *bhikkhu* to observe the precepts of the tradition, and live as close as possible to the Path. Unobservant *bhikkhu* are seen as a waste of the laity’s gifts. Their genetic and material self-sacrifice is taken as a sign of moral purity, as well as evidence of their lack of attachment, and therefore of their value as repositories of merit.

If Buddhism is unthinkable without the Saṅgha, then it is also true that the Saṅgha is unthinkable without lay support...The lifestyle of the Buddhist monk is thus founded on a relationship of trust between himself and his supporters. In accepting lay support in the form of robes, food and lodgings, the monk enters into a kind of lay social contract.<sup>309</sup>

*Dāna* is thus a system of exchange.<sup>310</sup> The laity give material goods to the Saṅgha and the Saṅgha give the laity an opportunity to earn merit. *Bhikkhu* also are thought to give laity the Dharma, but in terms of motivational salience, merit seems to be more important. The exchange relies on the Saṅgha being maintained as a ‘field for merit’ through observation of their vows. Celibacy is a central part of those vows. Celibacy therefore contributes to the maintenance of cooperative behaviours necessary to sustain the Saṅgha within lay communities.

The layman provides the monk with all the physical requirements – and more! – necessary to pursue his salvation-oriented goal, while the monk in turn provides the layman with the spiritual requirements (merit) necessary for *his* salvation-oriented goal...Viewing this *dāna* system as

---

<sup>308</sup> Gethin, *The Foundations of Buddhism*. 102.

<sup>309</sup> Ibid. 94.

<sup>310</sup> Ibid. 103.

an exchange system – alms offered in exchange for merit – we can better understand the Burmese insistence on the purity of their monks; for this, too, is based on the notion of reciprocity or exchange...Hence in addition to the symbolic reasons for the layman's insistence on monastic asceticism, they have another, more practical reason: by offering alms to worldly monks they are squandering their resources, for they are receiving a much poorer return on their investment...The layman's alms are offered in exchange for the monk's asceticism.<sup>311</sup>

Because celibacy is a constant representation of the spiritual purity of a *bhikkhu*, and a crucial part of their value as a 'field of merit', celibacy underlies the continued occurrence of lay giving behaviour. Celibacy is critical to the *dāna* system, and so functions to motivate cooperative behaviours between the laity and the Saṅgha, and also within the Saṅgha. Without celibacy, the continued support of the Saṅgha is threatened because *bhikkhu* are no longer a very good source of merit. As Spiro observed in Burma: "Everyone agrees that the greater the merit of the monk, i.e., the stricter his observance of the Rule, the greater the merit accruing to the donor."<sup>312</sup> A *bhikkhu*'s appearance of spiritual purity is crucial in maintaining the Saṅgha as a repository of merit the laity can access through giving.

The *dāna* system also puts impetus on the Saṅgha to remain in contact with the laity. That is, it contributes to the maintenance of Buddhist communities as a united whole instead of partite. Though *bhikkhu* may find abandonment of desire easier removed from society, they are bound as 'fields of merit' to remain in contact with the laity.

As a 'field of merit' the Saṅgha is under some obligation simply to make itself available to the laity. One of the principle ways the Vinaya does

---

<sup>311</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 412 - 413

<sup>312</sup> Ibid. 412

this about is by requiring monks to receive food from the laity every day...<sup>313</sup>

As Gethin touches on here, the way of life laid out in the Vinaya provides a design which maintains the Saṅgha as an independent but interdependent group within Buddhist communities.

The perception of the Saṅgha as a 'field of merit' is functional in maintaining the Saṅgha within Buddhist communities because it creates a need amongst the laity for the continued existence of the Saṅgha. Rather than perceiving support of the Saṅgha as an unnecessary cost, laity instead see it as an opportunity to gain merit. Thus, there is a real and pressing incentive for the laity to continue to support the *bhikkhu* in their midst. Importantly, this understanding of the Saṅgha as 'fields of merit' generates creates social pressure for the Saṅgha to observe the precepts. Cooperative behaviour within the Saṅgha, as well as cooperative behaviour between the laity and the Saṅgha is maintained through the perception of Saṅgha as a 'field of merit'.

#### *Collective nature of giving*

The desire for *dāna* motivates cooperative behaviour necessary for community-wide support of the Saṅgha. Further, that cooperation is not just between the laity and the Saṅgha, but extends throughout the lay community. Common commitment to the pursuit of merit can bring about cooperation within lay Buddhists communities, as they band together to support their local Saṅgha.

Whatever motives enter into ceremonies comprising the merit quest, the primary goal of these ceremonies is the feeding of monks, the offering of robes to monks, the provisioning of monasteries, and so on.

---

<sup>313</sup> Gethin, *The Foundations of Buddhism*. 103.

Indeed, when one includes the daily feeding of monks as an element in the cultus, one might argue that the *raison d'être* of the Burmese village is the maintenance and sustenance of the monk and the monastery – that this is the primary goal to which all its activities, including its economics activities, are directed.<sup>314</sup>

Supporting local Saṅgha cannot be done easily by a person of average income, or even a whole family of average income.<sup>315</sup> Communal pursuit of *dāna* is necessary for the survival of the Saṅgha, but its benefits extend throughout the lay community. As Dargyay noted amongst Tibetan Buddhists: “the act of donating was always perceived as the focal point of lay religious life, as an extraordinary effort to ensure the well-being of the entirety of one’s community, dead as well as living members.”<sup>316</sup> Similarly, the group-cooperative nature of *dāna* rituals demanded Spiro’s notice during his time in Burma:

...In the first place, Buddhist ritual, including the quest for merit is typically performed in consort with other people through collective ceremonies (offerings to monks and pagodas, recitation of the precepts on Sabbath, etc). These ceremonies...serve literally to integrate their participants into a physical unit. And this integration occurs at almost every level of Burmese society: an entire family may observe the Sabbath together in one monastery, a whole village may collectively celebrate a Buddhist festival in the village rest house, or a monastic funeral or robe offering ceremony may bring together scores of villages comprising a large district.<sup>317</sup>

Merit making festivals bring the laity together and promote cooperative behaviour amongst them. They present a common opportunity for making

---

<sup>314</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 472.

<sup>315</sup> Spiro’s description of how much the average Burmese Buddhist spends on *dāna*, and its probable effect on local income is illustrative. *Ibid.* 453 – 463.

<sup>316</sup> Dargyay, “Tsong-Kha-Pa’s Concept of Karma.” 188.

<sup>317</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 468 – 469.

merit, and thus it is in each individual's perceived best interest to cooperate.

Dargyay describes this in his observation of a festival in Nepal:

The religious significance of the Naropa festival, as explained to me by various native participants, is to enable the laity to accumulate merit...The fact that, at least theoretically, the entire population of the village participates in the Naropa *darśan*, that is, to visualise the sacred image and the meaning it stands for, ensures that the whole community accumulates good karma, thus guaranteeing a bright future.<sup>318</sup>

The pursuit of *dāna* binds local communities as a 'group' participating in common ritual behaviours. If religious cultures are selectively advantageous because they facilitate cooperative behaviours amongst groups such that the group can be subject to selection, then cultural variants like the concept of *dāna* are exactly what we would expect to see.

In addition to bringing people together physically, Buddhist ceremonies demand and create the transformation of the resulting physical group into a social group, characterised by cooperation and reciprocity...These activities are not only conducive to cooperation, but seem to create, if only temporarily, a strong feeling of unity within the group. Significantly, this unity transcends the divisiveness which, at least in some villages, is brought about by almost continuous factionalism.<sup>319</sup>

The Saṅgha, as a focus for Buddhist *dāna* ceremonies, creates cooperative unity within the communities that support it. Even if we view the Saṅgha as a parasitical outsider, the demands that their support makes on the communities that support them increases cooperation across those communities.

Commitment to Buddhism thus coordinates cooperation, and these effects can extend beyond specific local communities. Spiro views Buddhism as in part

---

<sup>318</sup> Dargyay, "Tsong-Kha-Pa's Concept of Karma." 182.

<sup>319</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 469.

responsible for creating a sense of community beyond any one village within Burma, despite diverse socio-political histories within the regions:

Cooperation for acquiring merit extends beyond the boundaries of the village...the extensiveness of inter-village interaction and cooperation instigated by the requirements of Buddhist action...Buddhism is the primary source not only of intra-village cooperation, but also of inter-village integration. This interaction, although motivated by the desire for merit and other Buddhist goals, often leads to inter-village marriages, and the consequent family alliances contribute to inter-village interaction for non-Buddhist ends ...<sup>320</sup>

The cooperative behaviours the Saṅgha requires to survive form cooperative networks between local communities which sustain it. In many areas the patronage required for the largest ceremonies that the Saṅgha conduct are only possible through the patronage of the crown and the large unified network of communities it represents. Thus, through its demands for large scale patronage and support, the Saṅgha can contribute to the creation of a need for state level structures.

The many different ways Buddhism provides intrinsic motivation for individuals to cooperate with each other is evidence of the adaptive function of the tradition for whole Buddhist communities, including the Saṅgha. Celibacy contributes directly to the continuation of cooperative behaviour within the tradition. Celibacy also increases the efficacy of the Saṅgha as cultural parents; it is seen as a necessary for the achievement of *bhikkhu's kammatic* goals; it contributes to the perception of the Saṅgha as a reservoir of merit for the laity to tap and it thus underlies the continuation of *dāna*. As celibacy is maintained, so too are the cooperative behaviours necessary for its support. The benefits

---

<sup>320</sup> Ibid. 470.

celibacy brings to Buddhist communities are carefully facilitated by the structure of the tradition and its careful transmission. As I turn to discuss now, these intrinsic motivators for cooperative behaviours across the whole of the Buddhist community are also accompanied by a tradition of discipline within the Saṅgha, which provides extrinsic motivation for individual *bhikkhu* to maintain celibacy. Taken together, these two elements of the tradition show how celibacy is carefully preserved within Buddhism, thereby also maintaining and transmitting its benefits.



## The Discipline

Celibacy, a crucial part of the lifestyle described by the Buddha as most conducive to achieving release, is recognised as important by both laity and Saṅgha.<sup>321</sup> However, it is generally only within the Saṅgha that celibacy is consistently practiced. This can be credited in part to the specific design of the Saṅgha and the rules which control the lives of those that belong to it. These features mean that, beyond just personal will and lack of sexual desire, celibacy is easier to maintain within the Saṅgha than out of it.

Buddhist tradition holds that the Buddha issued rules for behaviour in response to situations which arose as the Buddha's followers grew in numbers and coalesced into the Saṅgha.<sup>322</sup> These rules secured shared standards of behaviour, cementing the communal identity of the followers of the Buddha.<sup>323</sup> Over the course of the first hundred years following the death of the Buddha, the rules were formalised and shared amongst the whole of the Saṅgha. The result is known as the Pāṭimokkha,<sup>324</sup> a prescriptive collection of regulations

---

<sup>321</sup> "They say that monastic prohibitions serve to kill desire and the mental impurities. Like monks, laymen too view the sexual rules as the most important; if impurities are to be destroyed, the sex drive above all must be extinguished. Since all Buddhists *qua* Buddhists must aim at destroying their "impurities," sensual indulgence is not only strictly forbidden to monks, but, say the Burmese, should be avoided as much as possible by lay men. Sexual behaviour should be reduced to the barest minimum – sex precludes the possibility of attaining nirvana...In short, the layman, like the monk, is bound by Buddhist notions concerning physical desires. The monk must suppress them altogether; the layman – unable to suppress them – must limit their expression." Ibid. 300.

<sup>322</sup> Wijayaratna, *Buddhist Monastic Life*; Gethin, *The Foundations of Buddhism.*, 95 – 99.

<sup>323</sup> Wijayaratna, *Buddhist Monastic Life*. 121 – 122.

<sup>324</sup> This discussion has so far proceeded as if the Pāṭimokkha existed across all cultures in a vernacular comprehensible by the majority of *bhikkhu* within the community. There are, historically, instances where this assumption does not hold, because the Pāṭimokkha existed only in languages understood by a few *bhikkhu* within the community, and may not have been (Note continues over page)

detailing correct conduct, thought and practice for a *bhikkhu* who is attempting to live the Buddha's teaching, as well as stories detailing the circumstances which led to their establishment and commentary on the wording used to express them.<sup>325</sup> There are over two hundred rules within the *Pāṭimokkha* which the *bhikkhu* commits to attempting to abide by. Across the myriad of Buddhist cultures and traditions, the main tenets of the *Pāṭimokkha* are stable, providing a shared base for the practice of Buddha's teachings within the *Saṅgha*.<sup>326</sup>

This discussion of the most basic way in which the *Pāṭimokkha* maintains celibacy, looks first at the rules which prohibit sexual activity of any sort as well as the wide number of rules which maintain the *Saṅgha* as a sex-free environment.<sup>327</sup> The concern with celibacy promotes cooperation within the *Saṅgha*, and constrains lay/*Saṅgha* interactions, fundamentally separating the *Saṅgha* from the laity despite the *Saṅgha*'s reliance on the laity. This separation is a function of celibate behaviours. The stability of the *Pāṭimokkha* perpetuates both celibate behaviour and the resulting separation. I end with a

---

translated into the vernacular correctly, or disseminated widely. However, there is not room here to explore this complicated issue. So I will put the very large and complex issue of local language and the comprehension of the *Pāṭimokkha* aside, and assume that generally vernacular versions of the text were present and understood. For a brief discussion of issues around vernacular and translation see *Ibid*.

<sup>325</sup> Steve Collins "Introduction" to *Ibid*. xi-xiii.

<sup>326</sup> Whether or not the rules found within the *Pāṭimokkha* can be attributed directly to the Buddha himself, or whether they were established in the immediate centuries following the Buddha's death, the fact remains that across Buddhist traditions, the *Pāṭimokkha* is found in a remarkably similar form, attesting to both the early date of its inception, and the fidelity with which it was reproduced across various cultural traditions. Collins, Wijayratna Intro xviii; See also discussion in Gethin, *The Foundations of Buddhism*. 105 – 107.

<sup>327</sup> There are different versions of *Pāṭimokkha*, which have different numbers of regulations. These differences, though, do not affect the four most basic prohibitions, (including, crucially, the prohibition against sexual activity) and are considered relatively minor. *Ibid*. 89.

discussion of rules which guarantee the careful transmission of the rules governing celibacy. The protection of rules which guarantee celibacy also protects the separation of the Saṅgha from the laity, and the increased cooperation which can result from this separation. The individual rules within the Pāṭimokkha combine together to provide the basis for the continual replication of cooperative behaviour within the Saṅgha and between the Saṅgha and laity, promoting selection at the level of the entire Buddhist community.

The rules within the Pāṭimokkha are commonly divided into three main areas of concern: the maintenance of peaceful relations within the Saṅgha, the maintenance of peaceful relations between the Saṅgha and the lay community, and the maintenance of ideal conditions for individual practice.<sup>328</sup> Celibacy is important to all of these areas of concern (though not necessarily the main focus or only result).

If an individual has sexual relations after committing to the Saṅgha, then they violate one of four rules which are classified as *pārājika* (defeat). These rules are known as defeat because transgression irrevocably and automatically ends an individual's identity as a *bhikkhu*, and therefore also ends their attempt to escape the cycle of rebirth in this life.<sup>329</sup> "Monks who had committed offences

---

<sup>328</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*.292; Wijayaratna, *Buddhist Monastic Life*.122, 154. Gethin views the Vinaya as having four main areas of concern: "... (1) the unity and cohesion of the Saṅgha, (2) the spiritual life, (3) the dependence of the Saṅgha upon the wider community, and (4) the appearance of the Saṅgha in the eyes of that community." Gethin, *The Foundations of Buddhism*. 92. However, the dependence of the Saṅgha on the laity is intimately related to the appearance of the Saṅgha in the eyes of the laity, and thus I will consider the two points as one theme.

<sup>329</sup> These four rules were as follows: a bhikkhu may not have sexual intercourse with any human being or animal, a bhikkhu may not take something not given, a bhikkhu may not destroy life (Note continues over page)

entailing defeat had committed suicide in relation to the community.”<sup>330</sup> An individual who flouted the rule against sexual activity could no longer be regarded as a *bhikkhu*.<sup>331</sup> As Gethin puts it:

The failure to keep his vow of celibacy undermines one of the determining characteristics of the Buddhist monk: he has renounced the ordinary ‘householder’ life of wife, children, and family.<sup>332</sup>

Without *bhikkhu*, there is no Saṅgha,<sup>333</sup> therefore sexual activity within the Saṅgha threatened the existence of the Saṅgha itself. It is not surprising then that maintaining celibacy, and the ideal conditions for celibate practices, emerges repeatedly as one of the key concerns of the Pāṭimokkha.

By restricting membership to only celibate individuals, the Saṅgha also restricts its own potential growth. This restriction may seem counter-intuitive: selection is decided by growth. Yet there are several ways that such a restriction can serve to promote group fitness. The Saṅgha is an economically draining social institution dependent on local communities, and unconstrained growth threatens future survival rather than promoting it. For example, at various points in Chinese history, unmitigated growth of the Saṅgha threatend

---

and a *bhikkhu* may not falsely claim to have achieved supernatural powers. While all four rules are central to the maintenance of cooperative life within the Saṅgha, it is the occurrence of prohibitions against sexual activity which are of crucial importance to this discussion. Wijayaratna, *Buddhist Monastic Life*. 94; Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 292 – 293.

<sup>330</sup> Wijayaratna, *Buddhist Monastic Life*. 144.

<sup>331</sup> Ibid.

<sup>332</sup> Gethin, *The Foundations of Buddhism*. 89, Gethin continues: “...furthermore sexual abstinence is associated with channelling one’s energies towards spiritual attainments.” As I explore in the next section, it is held that sexual activity reduces the spiritual power that a *bhikkhu* possesses, reducing the merit earned by lay support of *bhikkhu*, and therefore potentially jeopardising that support. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 296 – 300, 304, 368; Gethin, *The Foundations of Buddhism*. 102 – 103.

<sup>333</sup> Wijayaratna, *Buddhist Monastic Life*. 94; Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 292 – 293.

its own survival, as lay governments attempted to curb its growth through forced laicisation and direct prohibition.<sup>334</sup>

Limiting membership to those individuals able and willing to maintain celibacy serves to keep growth in check. It also serves as a mechanism for sorting cooperative individuals from non-cooperative: by classing sexual activity as a *pārājika* offence, the Pāṭimokkha creates a self-selected group of only those individuals committed to constraining their behaviours. Though other requirements within the Vinaya also serve to restrict membership (for example, the requirement that intending individuals spend a certain amount of time as a student with an already ordained *bhikkhu* who decides whether or not they are suitable candidates for membership)<sup>335</sup> *pārājika* offences ensure that only individuals willing to cooperate with the rules of the Pāṭimokkha remain within the Saṅgha. The prohibition against sexual activity continually sorts individuals willing to cooperate from non-cooperative individuals, while also constraining the potential growth of the Saṅgha.

The Pāṭimokkha creates an ideal environment within the Saṅgha for the realisation of celibacy through careful control of any behaviour which might lead a *bhikkhu* away from correct behaviours or thoughts, as well as the control over who may or may not belong to the Saṅgha.<sup>336</sup> A conducive environment for practice is in part maintained by restrictions over who can and cannot

---

<sup>334</sup> Jaques Gernet, *Buddhism in Chinese Society: An Economic History from the Fifth to the Tenth Centuries* (New York: Columbia University Press, 1995).

<sup>335</sup> Gethin, *The Foundations of Buddhism*. 87.

<sup>336</sup> “The codification of rules and precepts helped to promote a favourable environment for the religious life; the rules were necessary both to insure the continued existence of the community and to secure and protect the rights and duties of its individual members.” Wijayaratna, *Buddhist Monastic Life*. 156.

belong. Individuals who cannot uphold the basic tenets of the Pāṭimokkha are excluded from the community.<sup>337</sup> Individuals who are too young, too old, or who have debts or other attachments (i.e. husbands who have not received permission from their wives, or sons who do not have their parents' permission) are barred from the Community. In short, membership is restricted to those individuals who are most likely to be able to observe the behavioural rules, and maintain focus and loyalty to the Saṅgha. Individuals who threaten either the reputation of the Saṅgha, the practice of other individuals within the Saṅgha or the unity of the Saṅgha are, in theory, excluded, removing sources of potential temptation or conflict, therefore contributing to the maintenance of an environment of celibate practice.<sup>338</sup>

Though in principle the violation of a *pārājika* offence ends a *bhikkhu*'s right to belong to the Saṅgha, it should be noted that the degree of observation of celibacy across Buddhist traditions varies. In part, this can be attributed to the fact that some communities adopted the Bodhisattva precepts or their own disciplinary codes, as well as the Pāṭimokkha.<sup>339</sup> In some countries, it has been common for monks to have women residing in the monasteries, while in others

---

<sup>337</sup> Ibid. 120 – 121.

<sup>338</sup> In theory this is true, (Ibid. 120 – 121) but Spiro documents the difficulties that Burmese monasteries had in actually expelling individuals who were damaging to the reputation of the Saṅgha. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 376 – 377. Another example of such difficulties can be found historically, in Chinese monastic communities, which experienced large amounts of men joining out of a desire to avoid either conscription or taxation, thereby leading to governmental crackdowns, and threatening the continued existence of the Saṅgha. Gernet, *Buddhism in Chinese Society: An Economic History from the Fifth to the Tenth Centuries*. 30 – 44.

<sup>339</sup> Although the Bodhisattva precepts recommend celibacy except in some very specific circumstances. Peter Harvey, *An Introduction to Buddhist Ethics* (Cambridge: Cambridge University Press, 2000). 132 – 134.

sects have incorporated sexual activity into the ritual practice used.<sup>340</sup> In Japan, it has become commonplace for *bhikkhu* to be married and monastery property to be inherited through family lines.<sup>341</sup> These occurrences, though, are notable as exceptions to the general trend across Buddhist communities (even those which adhere to the Bodhisattva precepts) where the ideal of sexual abstinence is the norm.<sup>342</sup> Celibacy has remained a hallmark of the observant *bhikkhu*.<sup>343</sup>

The stability of celibate behaviours across Buddhist tradition is not just a function of the fact that non-celibate individuals are not included within the Saṅgha. It is also a result of design within the Pāṭimokkha, which steers *bhikkhu* from situations of sexual temptation, thereby constructing a social environment where celibacy is easier to observe than it would be within lay groups. The Saṅgha is maintained as a sex-free environment, where individuals observe modest standards of behaviour and dress. The Pāṭimokkha creates a framework for overcoming sexual desire specifically by removing many opportunities for sexual temptation from *bhikkhu*'s lives. Behavioural injunctions remove *bhikkhu* from situations, thoughts and actions where temptation might occur.<sup>344</sup> Women, be they nuns (*bhikkunī*) or lay women, are to be avoided generally, and a *bhikkhu* is never to be alone with a woman, or to stay a night under the same roof as a woman (or, for that matter, any female

---

<sup>340</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissittudes*. 398 n 8; Gethin, *The Foundations of Buddhism*. 269; Geoffrey Samuel, *Tantric Revisionings* (England: Ashgate Publishing Limited, 2005).

<sup>341</sup> Gethin, *The Foundations of Buddhism*. 107; Richard M. Jaffe, *Neither Monk nor Layman: Clerical Marriage in Modern Japanese Buddhism* (New Jersey: Princeton University Press, 2001).

<sup>342</sup> Spiro discusses his personal observance of celibate practice in Burma Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissittudes*. 366 – 368.

<sup>343</sup> Gethin, *The Foundations of Buddhism*. 88 – 89.

<sup>344</sup> Wijayaratna, *Buddhist Monastic Life*. Chapter 6: Chastity; Gethin, *The Buddhist Path to Awakening*. 91 – 94.

animal).<sup>345</sup>

Putting aside those rules of propriety, etiquette and simple good manners which are required by any civilised community – and a large percentage of the regulations in the Pāṭimokkha are of that order – and ignoring, too, those rules which are necessary for maintaining non-disruptive social relationships in any group, it is hardly surprising to discover that the basic concern of the Rule is with the regulation of monk's physical desires and temptations, especially lust, I say “hardly surprising” because this concern is but the institutionalized expression of the *raison d'être* of Buddhist monasticism, viz., to provide the framework which is most conducive to overcoming desire and achieving detachment.<sup>346</sup>

The careful construction of a celibate environment can also be seen in the care with which the intent and meaning behind the rules within the Pāṭimokkha are maintained and transmitted. The rules of the Pāṭimokkha are embedded throughout the Vinaya in stories recounting situations which led to the rule being laid down.<sup>347</sup> By including an account of why a rule was laid down, the intent behind the rule is preserved, potentially reducing ambiguity and therefore lessening the likelihood of either confusion or of accidental error. Further, many of the rules pre-empt individuals' attempts to stretch or bend the intent of the rules, contributing to the avoidance of temptation, and therefore the maintenance of celibate behaviours.<sup>348</sup> Gethin asserts that:

...the Vinaya's concern with the minutiae of a monk's handling of the requisites exhibits an awareness of human foibles as well as of the

---

<sup>345</sup> Chapter 6: Chastity, Wijayaratna, *Buddhist Monastic Life*. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 298.

<sup>346</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 294.

<sup>347</sup> Wijayaratna, *Buddhist Monastic Life*. xii. For a summation of the rules, along with an English translation of the stories associated with them, see Bhikkhu Thanissaro, "Introduction to the Patimokkha Rules," Access to Insight, <http://www.accesstoinsight.org/tipitaka/vin/sv/bhikkhu-pati-intro.html>.

<sup>348</sup> Gethin, *The Foundations of Buddhism*. 92.



mind's ingenuity and even deviousness in the face of rules and regulations designed to curb greed, aversion and delusion.<sup>349</sup>

The Pāṭimokkha effectively eliminates the rights of a *bhikkhu* to a private life.<sup>350</sup> Breaches of all but the most trivial of rules found within the Pāṭimokkha require confession either to other *bhikkhu*, or to the entire assembly of *bhikkhu*.<sup>351</sup> In so doing, it functions to eliminate opportunities for covert non-cooperation. *Bhikkhu* have fewer chances to breach their commitment to celibacy.

The Pāṭimokkha further contributes to maintaining celibate behaviour within the Saṅgha by making the participation of all *bhikkhu* in the punishment of transgressions mandatory. Punishment, in models of social cooperation, provides a second-order public goods dilemma – individuals who can avoid the costs that punishing a non-cooperative individual entails incur less cost and risk than others who choose to punish. Solving this second-order problem has been shown to be as essential in maintaining cooperation as solving first-order cooperation problems.<sup>352</sup> The Pāṭimokkha offers one solution to such second order public goods problems as it provides protection against non-punishment by making non-admonishment or non-punishment of transgressing individuals also an offence which must be confessed.<sup>353</sup> Individuals are enjoined to monitor their own conduct, but other *bhikkhu* are also obliged to assist, by noting

---

<sup>349</sup> Ibid. 93.

<sup>350</sup> "Confession inside the Buddhist community was simply a piece of institutional regulation with no universal validity. At a social level it emphasised the fact that members of the community did not have a private life..." Wijayaratna, *Buddhist Monastic Life*. 150.

<sup>351</sup> Ibid. 140 – 142.

<sup>352</sup> Richerson and Boyd, *Not by Genes Alone*. 99 – 101.

<sup>353</sup> Pācittiya offense 64, 69, 70. Bhikkhu Thanissaro, "Buddhist Monastic Code I: Rule Index," Access to Insight, <http://www.accesstoinsight.org/lib/authors/thanissaro/bmc1/bmc1.rule-index.html>.

contraventions of the Rule, giving admonitions about bad behaviour, and receiving confession.<sup>354</sup> Individual non-compliance becomes the business of the whole community, and maintaining adherence becomes a group effort rather than the act of one individual alone.

As well as the institutional punishments, it is also held that transgression of the *Pāṭimokkha* leads to negative kammatic consequences. For many rules the consequences of violation are believed to follow on immediately as a natural law, and thus are ultimately the problem of the individual.<sup>355</sup> As we have seen, individual commitment to the reality of the doctrine of *kamma* makes such consequences extremely motivational. Institutional penance and confession do not alleviate the kammatic consequences of behavioural breaches. The institutional punishments which attend transgression of the rules are generally not punitive, in part because the consequences of the action are thought to follow for the individual, regardless of institutional intervention.<sup>356</sup> Commitment to the doctrine of *kamma* motivates observance of the *Pāṭimokkha*, thereby contributing to the maintenance of celibate behaviours. Spiro observes: “There are a variety of reasons for the monks’ fidelity to their sexual vows. In the first place there is fear of karmic punishment: an unchaste monk

---

<sup>354</sup> Consider, for example, these rules: “Not informing another *bhikkhu* of a serious offense that one knows a third *bhikkhu* has committed — out of a desire to protect the third *bhikkhu* either from having to undergo the penalty or from the jeering remarks of other *bhikkhus* — is a *pācittiya* offense. (Pc 64)” ; “Communing, affiliating, or lying down under the same roof with a *bhikkhu* who has been suspended and not been restored — knowing that such is the case — is a *pācittiya* offense. (Pc 69)” or “Befriending, receiving services from, communing, or lying down under the same roof with an expelled novice — knowing that he has been expelled — is a *pācittiya* offense. (Pc 70)” Thanissaro, “Introduction to the Patimokkha Rules.”

<sup>355</sup> Wijayaratna, *Buddhist Monastic Life*. 149 – 150.

<sup>356</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 303 – 304.

will be punished in hell for sexual derelictions...”<sup>357</sup>

There is a synergistic effect between the Discipline within the Saṅgha and the Teaching (the Dharma): the Pāṭimokkha provides a framework where institutional punishments echo the *kammic* consequences of transgressive actions, thus providing a tangible, this-worldly, incentive to the *bhikkhu* to behave celibately. Both aspects of Buddhism promote and reinforce cooperative behaviour.

*Monastic discipline both separates the Saṅgha from laity and binds the Saṅgha to laity*

...The tendency to leave society is deliberately balanced in the Vinaya by rules which force the monk back into a relationship with society...the interaction of the lay and monastic communities is integral to the way of life set out by the Vinaya.<sup>358</sup>

The partite structure of Buddhist communities as well as the interdependence of the Saṅgha and the laity is protected throughout the Pāṭimokkha. Though the detailed rules forbidding contact with females remove *bhikkhu* from the everyday life of the lay communities that support them, unlike many Christian monastic orders, *bhikkhu* are not cloistered.<sup>359</sup> If one of the main goals of the Pāṭimokkha is to facilitate the *bhikkhu*'s relinquishment of desire in all forms then the insistence on continued interaction with local lay societies seems paradoxical. Surely, it could be argued that a total separation from lay society

---

<sup>357</sup> Though Spiro also notes that after appropriate confession, *bhikkhu* are thought to return to a moral state, even if their punishment must still be completed. Punishments can involve days of recitation of the Pāṭimokkha, and repeated confession. Individuals who deviate accepted behavioural norms are forced to repeat them at length, a punishment that would act effectively to remind an individual of the behaviours they had committed to. Ibid. 368.

<sup>358</sup> Gethin, *The Foundations of Buddhism*. 93.

<sup>359</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 280.

would more effectively allow *bhikkhu* to escape desire. Yet, if we regard celibate practice as the demarcation between two parts within one group, then both the insistence on celibacy and the carefully maintained proximity to the laity become explicitly functional. The whole Buddhist community, as a group subject to selection, is bound together by the needs of the Saṅgha.

While the Saṅgha's reliance on lay communities for food and clothing creates occasion for regular interaction,<sup>360</sup> the dependence of the Saṅgha on the lay community is rendered complete by celibacy. New members of the Saṅgha, necessary for the perpetuation of the tradition itself, must come from the community outside of the Saṅgha. The Saṅgha cannot replicate itself without lay cooperation. Securing the cooperation of the laity is thus a concern that extends beyond material needs. The Pāṭimokkha carefully specifies the Saṅgha's needs, keeping the *bhikkhu* in a constant relationship with the laity, while at the same time tightly constraining that relationship. A *bhikkhu* is judged by other *bhikkhu* and by the laity on how well they observe the rules of the Pāṭimokkha.<sup>361</sup>

Throughout the approximately two hundred and twenty rules of the Pāṭimokkha, there are many rules that protect the relationship between the

---

<sup>360</sup> Wijayaratna, *Buddhist Monastic Life*. 65 – 68.

<sup>361</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 410 – 421. Wijayaratna's discussion of monastic discipline as found within the ancient Theravada texts notes that frequently the origin stories of the rules within the Pāṭimokkha include a record of criticism levelled against monks by the laity. Thus, for example, the maintenance of regular *uposatha* recitals open to the public, (Wijayaratna, *Buddhist Monastic Life*. 133), prohibitions against receiving money, (——, *Buddhist Monastic Life*. 77) and prohibitions against associating with nuns, (——, *Buddhist Monastic Life*. 93) all cite criticism from the laity as motivations for the establishment of the rules.

Saṅgha and the laity through the constraint of *bhikkhu* behaviour.<sup>362</sup> Rules which ensure that the demands of the Saṅgha do not weigh too heavily on the laity protect the survival of the Saṅgha, by mitigating the risk of lay non-cooperation. Excessive costs to the laity threaten their continued support, and within the Pāṭimokkha the Saṅgha's demands on the laity are carefully proscribed.<sup>363</sup> For example, there are several rules that dictate when a *bhikkhu* can receive robes from the laity, forbidding them from asking or pleading with the laity for the accumulation of robes or other material comforts.<sup>364</sup> The possessions that a *bhikkhu* can own are strictly controlled as are the materials those possessions are made of, limiting what he is actually able to receive from that laity.<sup>365</sup> Pācittiya Rules 42 and 46<sup>366</sup> forbid *bhikkhu* from intruding on families who are eating when not invited, or when they have not told other *bhikkhu* they are going. The Buddha is recorded as teaching that that monks and nuns were to avoid being a cost on the lay societies they relied upon,<sup>367</sup> which shows an institutional imperative to constrain the costs that

---

<sup>362</sup> These rules are found throughout the *Pāṭimokkha*, especially regarding the provision of material goods and food. They serve to facilitate the individual relinquishment of desire in all forms, but also protect the laity from abuses by the Saṅgha.

<sup>363</sup> Spiro, Wijayratna and Gethin all identify the maintenance of good reputation within the eyes of the laity as one of the main areas of concern within the Pāṭimokkha. This can be seen specifically in the rules which restrict sexual activity, personal property as well as lying and malicious gossip (Pācittiya 1 – 3). Most tellingly, Pācittiya 9 restricts *bhikkhu* from reporting another *bhikkhu*'s offence to a non-ordained person without permission.

<sup>364</sup> Nissaggiya Pācittiya: Rules entailing forfeiture and confession. "Part One: The Robe-cloth Chapter", Thanissaro, "Bhikkhu Pātimokkha: The Bhikkhus' Code of Discipline."

<sup>365</sup> Nissaggiya Pācittiya: Rules entailing forfeiture and confession, "Part Two: The Silk Chapter as well as Part Nine: The Treasure Chapter" Ibid.

<sup>366</sup> Ibid.

<sup>367</sup> "So monks and nuns...were to take food from villages and towns as bees take nectar from flowers without damaging them (Dhp49). This advice was also given for the sake of lay society. If members of the Community had been constantly trying to find food, and if they had eaten more than once a day, it would have been more difficult for benefactors to support them. According to several sermons by the Buddha, the subsistence of monks and nuns was not to be a burden on lay society." Wijayaratna, *Buddhist Monastic Life*. 72- 73.

maintaining Saṅgha might entail.

As I discussed previously, the benefit that a Saṅgha brings to a community can only be selectively advantageous if it outweighs the costs. The preservation and transmission of rules which constrain community-wide cost is the preservation of functional design.

#### *Protection and careful transmission of the rule*

The Pāṭimokkha is nothing if not specific. Its detail protects and promotes celibacy. The continuation of division within the wider religious community relies on the stable transmission of that detail. Theories of CGS predict that traditions which secure and perpetuate their own replication will be maintained, and within the Pāṭimokkha we find rules which contribute to fidelity in its replication. This fidelity increases the likelihood of a stable replication of the communal norms of discipline within the Saṅgha, and secures the benefits which the Saṅgha brings to communities that support them. Stability is exactly what we see - the Pāṭimokkha has been transmitted with fidelity through the last two thousand years.

One set of rules<sup>368</sup> revolves around the *uposatha* ceremonies. These occur when local *bhikkhu* gather twice a month to recite the Pāṭimokkha. At the same time, *bhikkhu* are asked to examine themselves for any breaches of the rules laid out

---

<sup>368</sup> These rules are found within the Vinaya though not in the Pāṭimokkha specifically. Bhikkhu Thanissaro, "The Buddhist Monastic Code: Volume Ii. The Khandhaka Rules Translated and Explained," Access to Insight, <http://www.cambodianbuddhist.org/english/website/lib/modern/thanissaro/bmc2/index.html>.

therein and to confess breaches that may have occurred since the last recital.<sup>369</sup>

The ceremony thus serves to secure the maintenance of discipline by regularly providing *bhikkhu* with the opportunity to confess any breaches of the code, and reminding the entire community of its detail. Though in some traditions confession has since been separated into a different ceremony,<sup>370</sup> in either case, as Spiro observes:

Given the importance of the Rule, it is not surprising that institutions should have developed to insure compliance with its requirements. There are two such: regular recitation of the Pāṭimokkha within each chapter, and regular confession of violations of its constituent rules.<sup>371</sup>

In first learning and then regularly reciting the Pāṭimokkha, as *bhikkhus* do twice monthly, the entire group of *bhikkhu* are regularly reminded of possible offences against the behavioural standards expected within the Saṅgha, and the punishments at the institutional level that those offences will entail. Regular *uposatha* recitals and the structure of the Pāṭimokkha that is recited there, serve to perpetuate a universally applicable code of discipline within the Saṅgha.<sup>372</sup>

Though adherence to the Rule varies across communities, and across individuals within communities, in principle, the pattern of *uposatha* recital and its attendant confession serves to preserve the detailed prescriptions of the Pāṭimokkha and promote its communal observance. *Upasatha* recital was regarded within the tradition as important to the longevity and maintenance of

---

<sup>369</sup> Wijayaratna, *Buddhist Monastic Life*. 123 – 124; Gethin, *The Foundations of Buddhism*. 90; Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissittudes*. 302 – 304.

<sup>370</sup> Spiro points out that this is the case in Burma. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissittudes*. 302, 303.

<sup>371</sup> Ibid. 302.

<sup>372</sup> Ibid. 302.

the community.

In the Mahaparinibbana Sutta...the Buddha lists seven conditions that will help prevent the decline of the Community. The first two are these: “(1) As long as the bhikkhus meet often, meet a great deal, their growth can be expected, not their decline. (2) As long as the bhikkhus meet in harmony, adjourn from their meetings in harmony, and conduct Community business in harmony, their growth can be expected, not their decline.” The *uposatha* observance was formulated to help meet these conditions. It provides an opportunity on a fortnightly basis for the bhikkhus to meet with their fellows in the vicinity, to update their membership rolls, to deal with any wayward members, and to reaffirm their adherence to the rules of the Vinaya. The act of observing the *uposatha* together is what defines “common communion” in any given territory.<sup>373</sup>

The adherence to many of the same rules despite the diversity of cultural environments within which the Saṅgha is found suggests that the regular recital of the Pāṭimokkha helps to preserve common discipline, contributing to a communal identity across the Saṅgha. Regardless of the level of actual adherence in any one local Saṅgha, the recital preserves and transmits the Pāṭimokkha for future *bhikkhu*.<sup>374</sup>

Further, the *uposatha* ceremonies provide an outward sign of the maintenance of commitment to communal discipline by the Saṅgha to the laity which supports them. It is a sign to the community of lay supporters that the Saṅgha are bound to discipline, and that any breach will be communally recognised and rectified.<sup>375</sup>

---

<sup>373</sup> Thanissaro, "The Buddhist Monastic Code: Volume II. The Khandhaka Rules Translated and Explained." Chapter 15: Uposatha

<sup>374</sup> Gethin, *The Foundations of Buddhism*. 90, 92 – 93.

<sup>375</sup> Also, the *uposatha* days are often observed by lay members of Buddhist communities, who may come to the monastery and either receive a sermon from bhikku, or engage in their own (Note continues over page)



... *Prātimokṣa* is not just the monastic ‘glue’ holding the Saṅgha together but the common ground on which the internally enforced ethical life is manifested externally in the community.<sup>376</sup>

Such outward signs could assure the laity that the Saṅgha are committed to living the teaching, and are therefore worthy fields of merit, motivating continued lay support, I explored previously. It also reassures other *bhikkhu* that their co-practitioners are observing the common discipline they have all committed to. Living according to the rigorous path of the *Pāṭimokkha* shows that an individual *bhikkhu* is successfully cultivating internal discipline, and the *uposatha* ritual provides a communal reassurance that *bhikkhu* are doing just that.

Commitment to communal discipline (and celibacy) is a crucial component of entrance to the Saṅgha. The ordination ceremony, which formally marks an initiates’ entrance, centres on a *bhikkhu*’s declaration to observe the *Pāṭimokkha*, and therefore to maintain the discipline that defines the community.<sup>377</sup> That commitment is undertaken in front of at least five ordained *bhikkhu*, who have been ordained for ten years at the time of ordination.<sup>378</sup> The ordination ceremony reinforces the identity of the Saṅgha as a cohesive group: the intending *bhikkhu* has to ask for the acceptance and approval of the

---

learning. *Upasatha* observance is an important institution which binds the Buddhist community as a whole together. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissittudes*. 217 – 218.

<sup>376</sup> Prebish, *Buddhist Monastic Discipline: The Sanskrit Pratimoksa Sutras of the Mahasamghikas and Mulasarvastivadins* 27.

<sup>377</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissittudes*. 291; Gethin, *The Foundations of Buddhism*. 87 – 89.

<sup>378</sup> Gethin, *The Foundations of Buddhism*. 50, 87; Spiro notes that only four monks are needed to conduct an ordination in his study of Burmese Buddhism. (Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissittudes*. 291), while Wijayratna merely observes that the minimum number of monks to complete an ordination was detailed within the Vinaya. Wijayaratna, *Buddhist Monastic Life*. 120.

gathered ordained monks, and then he consents to observation of the *pārājika* precepts.<sup>379</sup> Entrance is conditional on communal consent, emphasising the collective nature of the *bhikkhu* and their communal identity as Saṅgha,<sup>380</sup> Ordination ceremonies are found across Buddhist traditions, and, though details of ceremony, dress and circumstance change, the central act of an individual undertaking commitment to the discipline in the presence of other *bhikkhu* does not.<sup>381</sup>

The importance with which the discipline is regarded can be seen in its authoritarian role within the Saṅgha itself. Regulations for communal living are all found there, as well as details of dispute settlement and adjudication.<sup>382</sup> The Saṅgha is, if organised strictly according to the Pāṭimokkha, an organisation without a formal head or ruler.<sup>383</sup> Instead, authority is vested in the Pāṭimokkha and in the teaching more generally.<sup>384</sup> Emphasising discipline not only as a defining feature of the Saṅgha, but as a guiding authority as well, is a design which sidesteps potential political issues that could arise from human leadership, mitigating the threat of any specific cultural or political circumstances to the institution as a whole, and protecting the corporate identity of the Saṅgha, as well as securing the content of the Pāṭimokkha against change.

---

<sup>379</sup> Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 291.

<sup>380</sup> As Wijayaratna put it while discussing the establishment of ordination ceremonies: "The details of this procedure clearly show that from then on the authority, the right and the power to bestow major ordination rested with the Community." Wijayaratna, *Buddhist Monastic Life*. 119.

<sup>381</sup> Gethin, *The Foundations of Buddhism*. 88.

<sup>382</sup> Wijayaratna, *Buddhist Monastic Life*. 152, Gethin, *The Foundations of Buddhism*. 90.

<sup>383</sup> Though in many traditions since, formal leaders have arisen. Wijayaratna, *Buddhist Monastic Life*. 155 n 8.

<sup>384</sup> Ibid. 152 - 154; Thanissaro, "The Buddhist Monastic Code: Volume Ii. The Khandhaka Rules Translated and Explained." Chapter 15: Uposatha

While discipline defines the Saṅgha and unifies it, it is also the one feature of the tradition with the capacity to lead to schisms within the Order.<sup>385</sup> As Gethin notes:

The only opinion or view that is even to be censured according to the Vinaya is the view that sexual intercourse is not an 'obstacle'. It is easy to see the practical reason why: it threatens the very basis of a celibate community. Since the Vinaya left monks and nuns largely free to develop the Buddha's teaching doctrinally as they saw fit, there would be little reason to provoke a schism on purely doctrinal grounds. What was of public concern was living by the monastic rules not doctrinal conformity.<sup>386</sup>

Though there is room made within the tradition for disagreements and discussions on the doctrine, this same leniency is not given to the basic requirements of the discipline. *Bhikkhu* are instructed to do all they can to avoid schisms within the Saṅgha.

Provoking a schism was regarded as a major offense, in the same category as killing one's mother, one's father, or an arahat, or wounding a Buddha (Vin II 193). Monks and nuns were not allowed to attempt to provoke schism, nor to harbour opinions liable to lead to a schism (Saṅghadisesa rule 10 and 11 in the *bhikkhu*-Pāṭimokkha...)<sup>387</sup>

Since schisms can only be caused by dissenting views over discipline, variation is discouraged within the Pāṭimokkha. What results is a tradition with doctrinal flexibility (and the capacity to adjust and accommodate various pre-existent

---

<sup>385</sup> Gethin, *The Foundations of Buddhism*. 50 – 52. Gethin discusses one of the earliest splits of the Saṅgha, which some scholars attribute to a dispute over the Vinaya. Spiro discusses some of the disputes which have divided the Saṅgha historically, highlighting that these schisms occur over discipline not doctrine. Spiro, *Buddhism and Society: A Great Tradition and Its Burmese Vissitudes*. 316 – 318, also 319 n 17.

<sup>386</sup> Gethin, *The Foundations of Buddhism*. 50 – 51.

<sup>387</sup> Wijayaratna, *Buddhist Monastic Life*. 127.

cultural beliefs within supportive lay communities)<sup>388</sup> but with a stable and commonly held code of conduct, which all members of the community commit to striving to observe. The maintenance and protection of that discipline, even if it means a potential schism within the Order, is thus of central importance within the traditions.

I have argued that cooperative behaviour generally, and celibate behaviour specifically, is maintained within the Saṅgha through an emphasis on common discipline encoded within the Pāṭimokkha. I briefly explored how the Pāṭimokkha influences relationships within the Saṅgha and between the Saṅgha and the laity. I also explored how it creates an environment within the Saṅgha within which celibacy can be maintained. Finally, I considered the design inherent within the Vinaya which contributes to the maintenance of the Pāṭimokkha with as little variation as possible. All of these facets of Buddhism contribute to the preservation of celibacy, and its attendant benefits for Buddhist communities.

---

<sup>388</sup> Carrithers, *Buddha: A Very Short Introduction*. 79 – 81.

## Conclusion

Since Darwin, sexuality has been at the centre of theories about the genetic and cultural evolution of humans. Celibacy provides a dramatic challenge to this emphasis on sex, and forces us to ask how evolution might account for the endurance of behaviours which are deleterious for genetic well-being across hundreds of generations. The theory of CGS allows us to see why celibacy is beneficial to the groups which support it. I have argued that celibacy increases the cooperative potential of communities. There have been massive social, cultural and technological changes across Buddhist communities since the time of the Buddha's teaching. Yet the many ways celibacy is promoted and protected have remained stable. This endurance is evidence that selection favours celibacy and any part of the tradition which contributes to it, even in the face of competing traditions.

If celibacy occurred only within Buddhism we could dismiss it as an interesting single case. But, as I discussed briefly in Chapter 3, many of the behaviours required of *bhikkhu* are similar to behaviours required of celibates within other traditions.<sup>389</sup> In particular, there is commonly an emphasis on realignment of the celibates' identity from the kin group to the religious group in general and the celibate order in particular.<sup>390</sup> Individuals who commit to celibacy are symbolically marked as separate from the laity which supports them in Buddhism as well as in traditions such as Catholicism. As we have seen in the

---

<sup>389</sup> Qirko, "The Institutional Maintenance of Celibacy."

<sup>390</sup> ———, "Altruistic Celibacy, Kin-Cue Manipulation and the Development of Religious Institutions."; ———, "The Institutional Maintenance of Celibacy."

Buddhist context, so too in other religions: celibacy divides communities into at least two distinct parts.

Convergent evolution explains that two different types of organism, given similar selection pressures evolve similar beneficial traits despite the different routes that their evolution takes. Such a theory would explain the celibate institutions emerging separately in geographically and historically diverse religions. Although the ways that celibacy is maintained within a religion no doubt differs between religions, the reasons that celibacy is maintained could well be the same. Celibacy provides a means for increasing cooperation in groups.

Whether or not CGS offers the most convincing evolutionary account for celibacy in other religions can only be ascertained through further research. This thesis has, I hope, demonstrated that such research is worth doing. Consideration of celibacy as a product of evolutionary process focuses our attention on the puzzle of cost within religions, a recurrent feature of religion which is often overlooked. As Buddhist celibacy shows us, religious behaviours challenge evolutionary theory, and study of those challenges can enhance our understanding of the processes that shape culture. Our understanding of religion can be enriched through the study of evolution, just as our understanding of evolution can be enhanced through the study of religion.

## Bibliography

- Andrews, Paul W. , Gangestad, Steven W. ,Matthews Dan "Adaptationism - How to Carry out an Exaptationist Program." *Behavioural and Brain Sciences* 25, no. 489 - 553 (2002): 74.
- Atran, Scott, and Ara Norenzayan. "Religion's Evolutionary Landscape: Counterintuition, Commitment, Compassion, Communion." *Behavioural and Brain Sciences* 27 (2004): 57.
- Bering, Jesse M. "The Folk Psychology of Souls." *Behavioural and Brain Sciences* 29 (2006): 453 - 98.
- Blume, Michael. "Von Hayek and the Amish Fertility." In *The Nature of God - Evolution and Religion*, edited by Ulrich Frey, 159 - 75: Tectum, 2010.
- Boehm, Christopher. *Hierarchy in the Forest: The Evolution of Egalitarian Behavior*. Massachusetts: Harvard University Press, 1999.
- Boyd, R., and P. J. Richerson. "Solving the Puzzle of Human Cooperation." In *Evolution and Culture*, edited by S. Levinson. Cambridge: MIT Press, 2005.
- Boyd, Robert, and Peter Richerson. "Cultural Adaptation and Innateness." In *The Innate Mind: Culture and Cognition*, edited by Peter Carruthers, Stephen Stich and Stephen Laurence. USA: Oxford University Press, 2006.
- . "Transmission Coupling Mechanisms: Cultural Group Selection." *Philosophical Transactions of the Royal Society Biological Sciences* 365 (2010): 3787 - 95.
- Boyd, Robert, and Peter J. Richerson. *Culture and the Evolutionary Process*. Chicago and London: The University of Chicago Press, 1985.
- . "Punishment Allows the Evolution of Cooperation (or Anything Else) in Sizable Groups." *Ethology and Sociobiology* : (1992) 13 (1992): 25.
- Bulbulia, Joseph. "Meme Infection or Religious Niche Construction? An Adaptationist Alternative to the Cultural Maladaptationist Hypothesis." *Method and Theory in the Study of Religion* 20 (2008): 1 - 42.
- . "Nature's Medicine: Religiosity as an Adaptation for Health and Cooperation." In *Where God and Science Meet: How Brain and Evolutionary Studies Alter Our Understanding of Religion*, edited by Patrick MacNamara. USA: Praeger Publishers, 2006.
- Bullitt, John T. "What Is Theravada Buddhism?" Access To Insight, <http://www.accesstoinsight.org/lib/authors/bullitt/theravada.html>.
- Burt, Austin, and Robert Trivers. *Genes in Conflict*. Harvard: Harvard University Press, 2006.

- . *Genes in Conflict: The Biology of Selfish Genetic Elements*. Cambridge: Harvard University Press, 2005.
- Carrithers, Michael. *Buddha: A Very Short Introduction*. Oxford: Oxford University Press, 2001.
- Collins, Steven. *Nirvana and Other Buddhist Felicities* Cambridge: Cambridge University Press, 1998.
- Crook, John, and Henry Osmaston, eds. *Himalayan Buddhist Villages: Environment, Resources, Society and Religious Life in Zangskar, Ladakh*. Bristol: University of Bristol, 1994.
- "Cultural Evolution." In *Stanford University Encyclopaedia of Philosophy*: Stanford University, 2010.
- Dargyay, Lobsang. "Tsong-Kha-Pa's Concept of Karma." In *Karma and Rebirth: Post-Classical Developments*, edited by Ronald Neufeldt. Albany: State University of New York Press, 1986.
- Darwin, Charles. *The Descent of Man and Selection in Relation to Sex* London: John Murray, Albemarle Street, 1906.
- Dawkins, Richard. "Darwin and Darwinism." *Encarta MSN* (1998).
- Dawkins., Richard. *The God Delusion*. London: Bantam Press, 2006.
- . *The Selfish Gene*. Oxford: Oxford University Press, 2006.
- Dennett, D. C., and R. T. McKay. "The Evolution of Misbelief." *Behavioural Brain Sciences* 32, no. 6 (2009): 493-510; discussion 10-61.
- Dennett, Daniel C. *Breaking the Spell: Religion as a Natural Phenomenon* New York: Penguin Group, 2006.
- . *Darwin's Dangerous Idea*. New York: Simon and Schuster, 1995.
- EGGE, James R. *Religious Giving and the Invention of Karma in Theravada Buddhism*. Richmond: Curzon Press, 2002.
- Eva Jablonka, Marion Lamb. *Evolution in Four Dimensions*. Cambridge: The MIT Press, 2005.
- Gernet, Jaques. *Buddhism in Chinese Society: An Economic History from the Fifth to the Tenth Centuries*. New York: Columbia University Press, 1995.
- Gers, Matt. "Human Culture and Cognition." Victoria University, 2008.
- Gethin, R. M. L. *The Buddhist Path to Awakening*, Oneworld Classics in Religious Studies. Oxford: Oneworld Publications, 2001.
- Gethin, Rupert. *The Foundations of Buddhism*. Oxford: Oxford University Press, 1998.
- Goodenough, Ward H. "Outline of a Framework for a Cultural Evolution Theory." *Cross Cultural Research* 33, no. 1 (1999): 25.
- Harvey, Peter. *An Introduction to Buddhist Ethics*. Cambridge: Cambridge University Press, 2000.



- . *The Selfless Mind: Personality, Consciousness and Nirvana in Early Buddhism*. Second ed. Oxon: RoutledgeCurzon, 2004.
- Heinrich, Joseph, and Robert Boyd. "On Modeling Cognition and Culture: Why Cultural Evolution Does Not Require Replication of Representations." *Cognition and Culture* 2, no. 2 (2002).
- Henrich, Joseph, Robert Boyd, and Peter J. Richerson. "Five Misunderstandings About Cultural Evolution." *Human Nature* 19 (2008): 119–37.
- Hill, Peter, and Kenneth Pargament. "Advances in the Conceptualization and Measurement of Religion and Spirituality Implications for Physical and Mental Health Research." *American Psychologist* 58, no. 1 (2003): 64 – 74.
- Jablonka, Eva, and Marion J. Lamb. *Epigenetic Inheritance and Evolution: The Lamarckian Dimension*. New York: Oxford University Press, 1995.
- Jaffe, Richard M. *Neither Monk nor Layman: Clerical Marriage in Modern Japanese Buddhism*. New Jersey: Princeton University Press, 2001.
- Johnson, Dominic D. P. "God Would Be a Costly Accident: Supernatural Beliefs as Adaptive. Commentary on 'the Evolution of Misbelief'." *Behavioural Brain Sciences* 32, no. 6 (2009): 493-510; discussion 10-61.
- Keyes, Charles F. "Merit-Transference in the Kammic Theory of Popular Theravada Buddhism." In *Karma: An Anthropological Inquiry*, edited by Charles F. Keyes and E. Valentine Daniel. Berkley: University of California Press, 1983.
- Kniffin, K. M. and D. S. Wilson. "Utilities of Gossip across Organizational Levels: Multilevel Selection, Free-Riders, and Teams." *Human Nature* 16 (2005): 5.
- Matthews, Bruce. "Post-Classical Developments in the Concepts of Karma and Rebirth in Theravada Buddhism." In *Karma and Rebirth: Post-Classical Developments*, edited by Ronald W. Neufeldt. Albany: State University of New York Press, 1986.
- McDermott, James P. *Development in the Early Buddhist Concept of Kamma/Karma*. New Delhi: Munshiram Manoharlal, 1984.
- Michael, George. "Professor Kevin Macdonald's Critique of Judaism: Legitimate Scholarship or the Intellectualization of Anti-Semitism?" *Journal of Church and State* 48, no. 4 (2006): 28.
- Miller, Geoffrey F. "Sexual Selection for Moral Virtues." *The Quarterly Review of Biology* 82, no. 2 (2007).
- Nattier, Jan. *A Few Good Men: The Bodhisattva Path According to the Inquiry of Ugra*. Edited by Luis Gomez, Studies in the Buddhist Traditions USA: University of Hawaii, 2003.

- Neufeldt, Ronald W., ed. *Karma and Rebirth*. Albany: State University of New York, 1986.
- Odling-Smee, John, Kevin Laland, and Marcus Feldman. *Niche Construction: The Neglected Process in Evolution*. Edited by Simon Levin and Henry Horn, Monographs in Population Biology. Princeton: Princeton University Press, 2003.
- Okasha, Samir. "Chapter 8. The Units and Levels of Selection." In *A Companion to the Philosophy of Biology*, edited by Sahotra Sarkar and Anya Plutynski: Blackwell, 2008.
- . "Recent Work on the Levels of Selection Problem." *Human Nature Review* 3 (2003): 349-56.
- Pargament, Kenneth. "Is Religion Good for Your Health? It Depends " In *Religious Practice and Health: What the Research Says*. Washington D.C.: Heritage Foundation, 2008.
- Plotkin, Henry. *The Imagined World Made Real*. London: Penguin Books, 2003.
- Prebish, Charles S. *Buddhist Monastic Discipline: The Sanskrit Pratimoksa Sutras of the Mahasamghikas and Mulasarvastivadins* New York: Pennsylvania State University, 1975.
- Qirko, Hector. "Altruistic Celibacy, Kin-Cue Manipulation and the Development of Religious Institutions." *Zygon* 39, no. 3 (2004): 26.
- . "The Institutional Maintenance of Celibacy." *Current Anthropology* 43, no. 2 (2002): 321-29.
- Richerson, Peter, and Robert Boyd. "Built for Speed, Not for Comfort: Darwinian Theory and Human Culture." *History and Philosophy of the Life Sciences* 23 (2001): 40.
- Richerson, Peter J., and Robert Boyd. *Not by Genes Alone*. Chicago: University of Chicago Press, 2006.
- Richerson, Peter J., Robert Boyd, and Joseph Henrich. "Gene-Culture Coevolution in the Age of Genomics." *Proceedings of the National Academy of Sciences* 107 no. 2 (2010 ): 8985-92.
- Richerson, Peter, and Lesley Newson. "Is Religion Adaptive? Yes, No, Neutral, but Mostly, We Don't Know." In *The Evolution of Religion: Studies, Theories, & Critiques*, edited by Joseph Bulbulia, Richard Sosis, Erica Harris, Russell Genet and Karen Wyman: Collins Foundation Press, 2008.
- Samuel, Geoffrey. *Civilised Shamans: Buddhism in Tibetan Societies*. USA: Smithsonian Institution, 1993.
- . *Tantric Revisionings*. England: Ashgate Publishing Limited, 2005.
- Schneider, Alison. "A California State Professor Is Attacked for His Defense of a Holocaust Denier." *The Chronicle of Higher Education* 46, no. 42 (2000): 1.

- Sober, E, and D.S. Wilson. *Unto Others: The Evolution and Psychology of Unselfish Behavior*. Cambridge: Harvard University Press, 1998.
- Sober, Elliott, and David Sloan Wilson. *Unto Others: The Evolution and Psychology of Unselfish Behaviour*. Cambridge: Harvard University Press, 1998.
- Sosis, Richard. "Why Aren't We All Hutterites?" *Human Nature* 14, no. 2 (2004): 38.
- Sosis, Richard "The Adaptationist-Byproduct Debate on the Evolution of Religion: Five Misunderstandings of the Adaptationist Program." *Journal of Cognition and Culture* 9 (2009): 315–32.
- Sosis, Richard, and Candace Alcorta. "Signaling, Solidarity, and the Sacred: The Evolution of Religious Behavior." *Evolutionary Anthropology* 12 (2003): 264–74.
- Sosis, Richard, and Eric Bressler. "Cooperation and Commune Longevity: A Test of the Costly Signaling Theory of Religion." *Cross-Cultural Research* 37, no. 2 (2003): 28
- Spiro, Melford. *Buddhism and Society: A Great Tradition and Its Burmese Vicissitudes*. USA: University of California Press, 1982.
- . *Buddhism and Society: A Great Tradition and Its Burmese Vissictudes*. Berkeley: University of California Press, 1982.
- Stark, Rodney, and Roger Finke. *Acts of Faith*. Berkeley: University of California Press, 2000.
- Sterelny, Kim. "The Evolution and Evolvability of Culture." In *Twenty Five Years of Spandrels*, edited by Dennis Walsh. Oxford: Oxford University Press, 2003.
- . "Memes Revisited." *The British Journal for the Philosophy of Science* 57, no. 1 (2006): 20.
- . "The Return of the Group." *Philosophy of Science* 63, no. 4 (1996): 562–84.
- . "Snafus: An Evolutionary Perspective." *Biological Theory* (2007).
- . *Thought in a Hostile World*. Malden: Blackwell, 2003.
- Sterelny, Kim, and Paul Griffiths. *Sex and Death: An Introduction to Philosophy and Biology*. London: University of Chicago Press, 1999.
- Strenski, Ivan. "On Generalized Exchange and the Domestication of the Sangha." *Man, New Series* 18, no. 3 (1983): 463–77.
- Thanissaro, Bhikkhu. "Bhikkhu Pātimokkha: The Bhikkhus' Code of Discipline." Access to Insight, <http://www.accesstoinsight.org/tipitaka/vin/sv/bhikkhu-pati.html#pc-part2>.

- . "Buddhist Monastic Code I: Rule Index." Access to Insight,  
<http://www.accesstoinsight.org/lib/authors/thanissaro/bmc1/bmc1.rule-index.html>.
- . "The Buddhist Monastic Code: Volume Ii. The Khandhaka Rules Translated and Explained." Access to Insight,  
<http://www.cambodianbuddhist.org/english/website/lib/modern/thanissaro/bmc2/index.html>.
- . "Introduction to the Patimokkha Rules." Access to Insight,  
<http://www.accesstoinsight.org/tipitaka/vin/sv/bhikkhu-pati-intro.html>.
- Tiyavanich, Kamala. *Forest Recollections: Wandering Monks in Twentieth Century Thailand*. USA: University of Hawai'i Press, 1997.
- Wijayaratna, Mohan. *Buddhist Monastic Life*. USA: Cambridge University Press, 1990.
- Wilson, D.S, Lynn, S. J. . "Adaptive Misbeliefs Are Pervasive, but the Case for Positive Illusions Is Weak: Commentary on 'the Evolution of Misbelief'." *Behavioural Brain Sciences* 32, no. 6 (2009): 493-510; discussion 10-61.
- Wilson, David Sloan. *Darwin's Cathedral: Evolution, Religion and the Nature of Society*. Chicago: Chicago University Press 2002.
- . "Evolution and Religion: The Transformation of the Obvious." In *The Evolution of Religion: Studies, Theories, and Critiques*, edited by Joseph Bulbulia, Richard Sosis, Erica Harris, Russell Genet, Cheryl Genet and Karen Wyman. Santa Margarita: The Collins Foundation Press, 2008.
- . "Human Groups as Adaptive Units: Towards a Permanent Consensus." In *The Innate Mind: Culture and Cognition*, edited by P. Carruthers, S. Laurence and S. Stich. Oxford: Oxford University Press, In press.
- . "Testing Major Evolutionary Hypotheses About Religion with a Random Sample." *Human Nature* 16, no. 4 (2004): 419 - 46.
- Wilson, David Sloan, and Edward O. Wilson. "Survival of the Selfless." *New Scientist* 196, no. 2628 (2007): 42(5).
- Wilson, David Sloan, and Edward O. Wilson. "Rethinking the Theoretical Foundation of Sociobiology." *The Quarterly Review of Biology* 82, no. 4 (2007).