Optimality Theory and Ethical Decision Making[1]

Steve and Mónica Parker
SIL, Papua New Guinea Branch

Peter and the other apostles replied: "We must obey God rather than men!" (Acts 5.29)

Optimality Theory (OT) is a formal linguistic model in which grammars consist of a universal set of violable constraints that are ranked in a language-particular hierarchy. Lower-ranked constraints are often forcibly violated in order to improve satisfaction of higher-ranked constraints. The optimal or most harmonic pronunciation of a given word is that output candidate which best fulfills the language-specific ranking for a selected input form.

In this paper we show how OT can be invoked and efficaciously applied to the task of moral decision making in those situations when two or more principles conflict. For example, Christians are expected to have fellowship with other believers. At the same time, Christian wives are supposed to submit to their husbands. Now what if a Christian woman is married to an unbelieving husband who tells her not to go to church? In cases such as these, it is impossible to fulfill both requirements simultaneously. Consequently, we claim that moral failure or sin cannot be directly correlated with disobedience in and of itself. Disobedience is a necessary, but not a sufficient, condition for sin. Rather, we propose a novel and precise definition of "sin" as choosing a biblically non-optimal course of behavior.

1. The problem

The primary function of moral codes is to help us know what types of behavior are considered good and bad in specific circumstances. There are many different kinds of ethical systems to which one may ascribe, depending on one's political, cultural, and religious presuppositions. Hence, moral codes vary widely. Some are informal and handed down as oral traditions from one generation to the next. Others are rigidly codified as written texts considered sacred by their adherents, e.g., the Koran. Some codes are limited to very narrow aspects of our lives and violation of them can be relatively harmless, such as standards for proper attire. Others are intended to be more serious and comprehensive statements about every detail of our existence. Given the limitless variety of circumstances which may arise in human lives, it is impossible for any one given code to cover every conceivable decision with precise guidelines. Thus in order for a moral code to be practical, it should anticipate novel scenarios and provide general instructions for dealing with them. Furthermore, situations may occur in which two or more ethical principles contradict each other, and a well-designed code should also inform its followers what to do in a case of this type. As Lutzer 1981:88 puts it, "In any discussion of… ethics, the question arises as to what kind of conduct pleases God in those special situations in which two universal moral laws appear to be in conflict."

---

[1] The notion that Optimality Theory could be invoked to evaluate moral decisions was first suggested to us by Amalia Gnanadesikan. We would like to thank her, as well as Albert Bickford, Mike Cahill, Paul de Lacy, Karl Franklin, James Hafford, Clif Olson, Mary Raymond, Jeff Sickmeier, Keith Snider, Gerhard Tauberschmidt, and René van den Berg for further discussion of the issues raised here. Please do not assume that these people necessarily agree with us about any of these ideas. Scripture quotations are from the New International Version.

One large and very well known repository of moral teachings is of course the Bible. For the sake of concreteness and consistency, our discussion here will primarily be focused on biblical principles. Nevertheless, the system of interpretation we propose is of such general and practical scope that it could easily be applied to other types of decisions, even those which are not strictly speaking ethical in nature. For example, the manager of a company could invoke the principles we espouse to utilize resources such as time, personnel, equipment, physical space, etc., in the most efficient way. However, moral decisions are especially important and interesting since they test our character and, many people believe, have far-reaching implications in our lives.

The purpose of this paper is to discuss a few hypothetical scenarios in which two or more ethical principles appear to conflict with one another and suggest a practical way to resolve them. To take one example from the Bible, Christians are exhorted to have fellowship with other believers on a regular basis (Matt. 18.20; Acts 2.42, 44, 46; Hebr. 10.24–25). At the same time, Christian wives are commanded to submit to their husbands (1 Cor. 11.3; Eph. 5.22–24; Col. 3.18; 1 Pet. 3.1). Now what if a believing woman is married to a non-Christian man who tells her not to go to church? This obviously presents a dilemma. The central claim of this article is that in circumstances of this type, it is impossible to simultaneously fulfill (obey) every relevant commandment of the scriptures. Rather, in situations where two doctrines logically conflict with one another, the believer must disobey one of them so that he or she may comply with the other, more important, commandment (assuming that there is some coherent system in place to dictate which teachings are the most critical). For example, in our hypothetical setting, we argue that the wife is permitted and even compelled by the Bible to disregard the husband's injunction not to attend church, so that she can maintain a clear conscience with respect to commandments contained in other relevant verses. We do not mean to imply here that this issue is simply quantitative in nature— violate the fewest number of verses possible. Rather, it is clearly a qualitative matter—some commandments are inherently more important in God's eyes than others, numbers aside. Ramsey 1953:47 anticipates this concept when he states that every legal system needs to include "…rules establishing some order of preference among the laws in case conflict makes necessary a breach of one or more of them."

We propose that Optimality Theory (OT) be adopted to provide a formal framework for analyzing and evaluating moral decisions of this type. The principal tenet of OT is that linguistic grammars consist of a series of ranked and violable constraints which jointly select the best output or phonetic form for each input. In this paper we claim that OT can be efficaciously applied to the task of biblical interpretation in those cases when two or more potentially antagonistic commandments need to be resolved.[2] In the ensuing discussion we propose a novel, precise, and theory-internal definition of "sin" as choosing a scripturally non-optimal course of behavior.

The remainder of this paper is organized as follows. In §2 we set the stage by outlining the presuppositions and formal machinery of OT. In §3 we then show how OT can be invoked as a basis for prioritizing ethical considerations, especially when these might otherwise leave us in a potentially frustrating dilemma. We summarize in §4.

2. Optimality Theory and Linguistic Grammars

In this section we briefly review the central claims and formal devices of OT. The *opus classicum* of Optimality Theory is Prince and Smolensky 1993. Two recent and comprehensive textbooks are Kager 1999 and McCarthy 2002. OT was initially applied to phonology. It is now firmly entrenched in generative syntax as well, and has lately made its way into semantics.

---

[2]See Geisler 1971 for a discussion of other ways to deal with moral conflicts.

An OT grammar consists of a language-specific ranking of the universal set of constraints, known as CON. However, in contrast to most previous models, OT constraints are potentially violable. Therefore, lower-ranked constraints may be forcibly violated if this would improve satisfaction of higher-ranked constraints. Nevertheless, constraint violation must still be as minimal as possible. For example, when the plural suffix /-z/ is added to English nouns, a sequence of two sibilants is sometimes created: /ǰʌǰ/ 'judge' → *[ǰʌǰz]. When this happens, an epenthetic reduced vowel is introduced to repair the illicit sibilant cluster: [ǰʌǰɨz]. This tells us that in English, the constraint which outlaws two [+strident] segments in a row (possibly the Obligatory Contour Principle) takes precedence over the natural pressure not to insert vowels. Nevertheless, epenthesis only applies at most once in each plural form since multiple insertion as in *[ǰʌǰɨɨɨz] gratuitously violates the constraint against epenthesis without any compensating improvement on the prohibition against adjacent sibilants. In other words, overkill is not tolerated.

In OT there are two types of constraints. MARKEDNESS (or structural) constraints tell us that certain features, structures, or configurations either must or must not be present in output forms. For example, ONSET requires all syllables to begin with at least one consonant, whereas NOCODA militates against syllables which end with a consonant. The prohibition against adjacent [+strid] specifications is another type of markedness constraint. FAITHFULNESS constraints, on the other hand, prevent us from changing the input (underlying) form in any way. That is, they tell us that it is bad to either add or delete segments or otherwise modify the input → output mapping. Thus the English word [ǰʌǰɨz] entails a violation of the faithfulness constraint which rules out epenthetic vowels. The interleaving of the whole universal series of markedness and faithfulness constraints produces the grammar of a specific language. Furthermore, permuting the relative rankings of these constraints accounts for the diverse typology and variation we observe from one language to the next.

In OT, there are no phonological rules in the classical sense. Rather, phonological processes (alternations) occur because some constraints dominate (outrank) other constraints. The central and only graphical formal device in OT is a type of table known as a *tableau*. Along the top row of a tableau we list the constraints that are most relevant to a particular input form. The left-to-right sequential order in which these constraints are displayed in a tableau corresponds to the hierarchical ranking of these constraints as posited for the language in question. The leftmost column of each tableau consists of a set of CANDIDATES or potential output (surface) forms for a given input. In theory the candidate set is infinite and universal, meaning that any and every conceivable output structure must be considered simultaneously. In other words, there are no language-specific restrictions on the list of candidates that need to be sifted through by the grammar. In actual practice, however, we normally include in a tableau only those output forms which are the most likely and/or relevant contenders for the underlying representation being considered. The following tableau illustrates the evaluation of the English word [ǰʌǰɨz] as outlined informally above:

(1)

Input: /ǰʌǰ-z/	*SIB-SIB	DONOTINSERT
a. [ǰʌǰz]	*!	
b. ☞ [ǰʌǰɨz]		*

In tableau (1) above, we have posited a simplified markedness constraint called *SIB-SIB which rules out adjacent [+strid] consonants. In English this constraint outranks an antagonistic faithfulness constraint which basically says "Don't insert a segment which was not present in the Input." (The precise names and formulations of these constraints are tangential to our purposes here.) Tableau cells which contain one or more asterisks (*) indicate that the candidate at the far left in that row violates the constraint mentioned at the top of that column. Thus candidate (a) [ǰʌǰz] violates the *SIB-SIB markedness constraint since it contains the cluster [ǰz]. However, [ǰʌǰz] perfectly satisfies the faithfulness constraint against insertion since it is identical to the Input (underlying) form. Therefore, it does not violate DONOTINSERT, so that

cell is left blank for this candidate. Candidate (b) [ǰʌǰɨz], on the other hand, satisfies *SIB-SIB at the expense of violating the lower-ranked DONOTINSERT (it has introduced a vowel in order to break up the sibilant cluster). Note that candidate (a) violates a constraint higher in the hierarchy of English (i.e., farther to the left in the tableau) than candidate (b) does. Consequently, (a) is not chosen as the actual output in this case; it is ungrammatical. Its violation of *SIB-SIB knocks it out of the running compared to (b). The ! symbol indicates that this violation of *SIB-SIB is fatal to (crucial to eliminating) candidate (a). Candidate (b) also has one violation mark in this tableau, for the constraint DONOTINSERT (whose locus of infraction is the epenthetic [ɨ]). This is not as serious as violating *SIB-SIB because in English, *SIB-SIB outranks (dominates) DONOTINSERT. Consequently, (b) is selected as the best (optimal) candidate for this particular Input since it has fulfilled the relevant constraints in the most harmonic way, i.e., better than all other contenders (given this language-specific ranking). The winning candidate in each tableau is (redundantly) indicated by the symbol ☞. Thus, in English the word meaning 'judge plural' is pronounced [ǰʌǰɨz].[3]

This is a very simple and compact illustration of how OT works. In a complete analysis we normally consider many more constraints and candidates. For example, another possible way to repair the marked sibilant cluster in /ǰʌǰz/ is to delete either the /z/ or the second /ǰ/. In English these options are ruled out by a faithfulness constraint blocking segmental deletion which dominates DONOTINSERT. In some other language with a different ranking of these constraints, an input like /ǰʌǰz/ might have a different evaluation and thus a different outcome. Nevertheless, tableau (1) establishes the fact that in English, *SIB-SIB dominates DONOTINSERT. This crucial ranking is symbolically encapsulated in OT in this way: *SIB-SIB >> DONOTINSERT. Consequently, in English it is more important to satisfy *SIB-SIB than it is to satisfy DONOTINSERT, *all else being equal*. Conversely, violating DONOTINSERT is tolerated more than violating *SIB-SIB (in English). Nevertheless, DONOTINSERT can still make its presence felt, even though it is (relatively) low-ranked; the hypothetical candidate *[ǰʌǰɨɨɨz], with three epenthetic vowels, is also non-optimal since it violates DONOTINSERT more than the attested winner [ǰʌǰɨz] does. Hence, violation of lower-ranked constraints can be compelled, but violation is always as minimal as possible, *ceteris paribus*.

An interesting side effect of this latter point is that OT excels at capturing linguistic interactions or conflicts of the type "Do (or do not do) x except when y". In the example above, for instance, we could express the generalization for English as "Do not insert any vowels except when two sibilants would otherwise end up being adjacent in the output form" (obviously this is only one small piece of the grammar). In previous models, "exceptions to the rule" often led to cumbersome, inelegant analyses since they required us to invoke different types of formal mechanisms for dealing with a unitary phenomenon. For example, in languages where a peripheral syllable is always skipped over by "exhaustive" metrical parsing, this had to be accounted for by extraprosodicity. This suggests that grammars are non-isomorphic. In OT, on the other hand, *all* linguistic facts are captured by a single, uniform device: ranked and violable constraints. Consequently, every constraint in the universal inventory of CON expresses a linguistically significant tendency or generalization that holds true of all languages, *modulo* other constraints. Thus the only difference between languages lies in their ranking of these constraints. The following list enumerates a series of phonological patterns of the type "Do (or do not do) x except when y" which have been observed in many languages:

---

[3]In OT there is normally just one optimal winning candidate which gets pronounced for any given input form. However, in cases when certain constraints are tied (co-ranked), there may be two alternative surface forms for a specific word. This would be necessary, for example, in situations of free variation.

(2)
- Onsetless syllables are prohibited except word-initially.
- Every syllable in a prosodic word must be parsed into some metrical constituent except when this would lead to a degenerate (monomoraic) foot.
- Adjacent identical segments are prohibited except across morpheme boundaries.
- Delete a word-final vowel except when this would leave a sub-minimal word.
- Every metrical foot must contain a head except when this would produce a stress clash.
- The segment [ʔ] is prohibited except phrase-initially.

If this paper were focusing on phonology per se, we would supplement the list in (2) with examples of languages which illustrate these phenomena. We would also naturally discuss the relevant constraints and their rankings which produce these effects. To include all of these details here, nevertheless, would take us too far afield of our principal concern, which is OT and moral decisions. Any interested reader can pursue these points in the extensive OT literature. Our main focus in this section has simply been to illustrate the nature of an OT grammar. As we will now see, analyzing other aspects of human behavior as the interaction of possibly conflicting constraints has useful applications outside of linguistics proper.

3.   OT and the Bible

The Bible is full of doctrines, teachings, commandments, and prohibitions. Some of these have the potential to interact with one another in the general sense that we have just discussed: "Do (or do not do) x *except* when y". Here are some examples:

(3)
- Divorce is prohibited (Deut. 22.19, 29; Mal. 2.16; Matt. 19.6; Mark 10.9; Rom. 7.2–3; 1 Cor. 7.10–13, 27) *except* in the case of *porneia* (Matt. 5.32, 19.9).
- All human beings are sinful (1 Kings 8.46; Psalm 14.1–3, 53.1–3, 143.2; Eccl. 7.20; Rom. 3.23; 1 John 1.8) *except* Jesus (John 8.46; 2 Cor. 5.21; Hebr. 4.15, 7.26, 9.14; 1 Pet. 1.19, 2.22).
- Killing another human being is wrong (Gen. 9.5–6; Ex. 20.13; Deut. 19.11–13; Matt. 19.18) *except* as a punishment for certain offenses (Ex. 21.12–17, 35.2; Lev. 20.9–16; Num. 35.16–21; Deut. 13.6–10, 17.12, 21.18–21).
- It is permitted to eat any food (Matt. 15.11, 17–20; Mark 7.15–19; Acts 10.15; Rom. 14.14, 20; 1 Cor. 8.8, 10.25; 1 Tim. 4.3–5) *except* when this would offend another believer (Rom. 14.13–17, 19–21; 1 Cor. 8.9–13).
- No human being is allowed to enter the Holy of Holies *except* the high priest (Hebr. 9.7).
- Christians should not judge one another (Matt. 7.1–5; Luke 6.37; Rom. 2.1–3, 14.13; James 4.11–12) *except* in the case of certain sins within the church (1 Cor. 5.1–5, 9–13).

In some of these cases there may be more than one "exception clause." For example, the prohibition against killing has been argued not to apply to soldiers, at least in combat settings. Some Christians (but not all) would also hold to the following belief:

(4)
- Abortion is prohibited *except* to save the physical life of the mother.

Another case of this type is that the Bible in general admonishes us not to lie (Ex. 20.16; Lev. 19.11; Psalm 101.7; Prov. 12.22, 19.5, 9; Zech. 8.16; Eph. 4.25; Col. 3.9). Nevertheless, God blessed Rahab, her whole family, and all of Israel when she lied to protect the men who were spying out the promised land

(Josh. 2.1–6). Similarly, a Jewish rabbi argues that it's okay to lie when the purpose is *pikuach nefesh* 'saving lives' (Telushkin 2000). Now consider the following injunctions:

(5)
- Wives should submit to their husbands (1 Cor. 11.3; Eph. 5.22–24; Col. 3.18; 1 Pet. 3.1) *except* when ???
- Children should obey their parents (Prov. 6.20; Eph. 6.1–3; Col. 3.20) *except* when ???
- Christians should submit to the governing authorities (Rom. 13.1–7; Tit. 3.1; 1 Pet. 2.13–14, 17) *except* when ???

A major goal of this section is to confront issues such as those listed in (3)–(5) above and show that OT provides a framework for making sense of moral "conflicts" of the type "Do (or do not do) x except when y". Our personal belief is that, like other consistent ethical codes, the Bible does not contradict itself. What OT offers us in terms of the process of scriptural hermeneutics is a principled, systematic approach to prioritizing the various commandments of the Bible into a logical, coherent hierarchy in which some "constraints" outrank or dominate others. In other words, our claim is that not all biblical commands are necessarily equal in force; some commands are more important to follow than others, *if and when* it is impossible to obey both of them simultaneously. One of the best illustrations of this principle comes from the words of Jesus himself:

> One of them, an expert in the law, tested him with this question: "Teacher, which is the greatest commandment in the Law?" Jesus replied: "'Love the Lord your God with all your heart and with all your soul and with all your mind.' This is the first and greatest commandment. And the second is like it: 'Love your neighbor as yourself.' " (Matt. 22.35–39)

In the passage quoted above, Jesus' answer suggests that there is something inherently different about these two commandments.[4] The principle he establishes here is that in some sense it is more important to love God than it is to love your neighbor. This implies a hierarchy of prioritization. It also implies that, in theory, there could arise a situation in which someone might have to choose between these two goals or objectives. Otherwise, if it never makes any practical difference whom we love more, why would Jesus have bothered to make this distinction? One conclusion that clearly emerges from this passage is that if these two commandments should ever come into conflict in such a way that we are forced to obey one of them at the expense of the other, loving your neighbor must give way to loving God. That is, drawing on the tenets of OT, the commandment to love your neighbor is violable and can (and should) be disobeyed, if necessary, in order to improve satisfaction of the higher-ranked "constraint" to love God. However, just as in phonology, violation must be as minimal as possible, all else being equal. Overkill is never optimal. The command to love our neighbor should *always* be fulfilled *except* when obedience to the more important commandment (loving God) is at stake.

A similar interplay of forces is at work in Luke 14.26: "If anyone comes to me and does not hate his father and mother, his wife and children, his brothers and sisters—yes, even his own life—he cannot be my disciple." Given the numerous other scriptural exhortations to love, honor, and respect our parents, spouses, etc., what are we to make of Jesus' using the word "hate" in this context (which is clearly an

---

[4]When Jesus says that the second commandment is *like* the first one, we do not take this to mean that they are equal in force or ranking. If that were the case, how could the first one be *greater* than the second one? Rather, they are alike in the sense that both involve loving someone else more than yourself.

instance of hyperbole)? Obviously, we do not need to literally hate all of these people. Rather, there is an implied comparison here: our love for Jesus should be so great that it outweighs our love for family and in effect makes our love for others seem miniscule in degree. Again, an implicit conclusion here is that in principle a situation could arise in which these two types of love come into conflict and one of them has to be relaxed (temporarily abandoned).

Let us now move from the realm of theory alone and illustrate our claims with a more concrete example. Recall the scenario from §1: suppose a non-Christian man orders his Christian wife to stay away from church (or from all other believers at all times). At this point two scriptural injunctions come into conflict: have fellowship with other believers (Matt. 18.20; Acts 2.42, 44, 46; Hebr. 10.24–25) and submit to your husband (1 Cor. 11.3; Eph. 5.22–24; Col. 3.18; 1 Pet. 3.1). In this situation, it would be impossible for the wife to simultaneously obey both commandments. No matter what she does, she must disregard one of them. We hope that the correct decision is clear and obvious in this case: the need for contact with other Christians frees the wife from the requirement to submit to her husband (on this one detail). In OT terms, we posit that verses like Matt. 18.20, Acts 2.42, 44, 46, and Hebr. 10.24–25 outrank or dominate 1 Cor. 11.3, Eph. 5.22–24, Col. 3.18, and 1 Pet. 3.1. An interesting question which arises in conjunction with this issue is, how are we, as fallible human beings, to know the correct ranking of biblical constraints? Phonological OT has different classes of constraints—faithfulness, markedness, alignment, etc. Perhaps most (or all?) scriptural injunctions similarly fall into only two families of related commandments: LOVEGOD (or OBEYGOD) and LOVEOTHERS. There may be other constraints which fit into neither of these classes, but it is hard to think of any examples! Furthermore, unlike most linguistic constraints, the two categories of biblical constraints are (probably!) universally fixed in their ranking such that LOVEGOD commandments always dominate LOVEOTHERS, and thus the two types can never be permuted (reversed). If this is true, it would greatly help the individual Christian in his or her "acquisition" of the correct scriptural hierarchy, and strongly restrict the number and types of possible ethical systems which could logically be derived from personal study and application of the Bible.[5]

Returning now to the specific example just discussed, to play the devil's advocate, a skeptic might argue that this situation is hypothetical and may never arise in real life. However, we personally know of at least one Christian pastor who advised a woman in his congregation not to attend church because her husband forbade it. In general we consider this particular "constraint ranking" to be wrong, as argued in the preceding paragraph. (In this specific instance, nevertheless, there was a mitigating factor: the husband was physically abusing his wife. This suggests some type of self preservation constraint which is even more crucial than going to church—another example of "Do x except when y".) At the same time, however, in this case there may be a compromise solution available, based on the fact that fellowship is not an all-or-nothing proposition. The New Testament liberates the Christian from legalistic adherence to certain requirements (Col. 2.16). For example, nowhere does it teach us that we must attend church every single Sunday without fail. Therefore, a Christian wife in this situation might choose to go to church on certain days but not on others, opting to stay at home with her husband on those occasions. However, although submission to husbands is subordinated to having fellowship (*ex hypothesi*), this does not give wives the freedom to blithely disregard the former constraint (or any other constraints, for that matter).

---

[5]For example, another hypothesis which we might initially consider is that the New Testament always takes precedence over the Old Testament. This principle is suggested by Jesus' frequent statements to the effect that "It has been said (or taught) *x*, but now I say to you *y*." The corresponding generalization is, obey the commandments of Moses except when these are superceded by the commandments of Jesus. Sometimes, however, this appears to work in the opposite way: do not commit divorce (which clearly seems to have been Jesus' preference) except for the law of Moses (infidelity).

Rather, the principle of minimal violation is still in force. In other words, "loving God" should not be an excuse to be callous and indifferent to those around us.

Another verse which is relevant (and likewise violable) here is Rom. 12.18: "*If it is possible, as far as it depends on you*, live at peace with everyone." These principles are compatible with and have precedents in OT since certain linguistic constraints are gradiently (as opposed to categorically) violable. For example, the alignment of metrical feet with prosodic edges is often imperfect and has to settle for "just doing the best that can be done." In the same way, certain commandments of scripture, such as "pray without ceasing" (1 Thess. 5.17), cannot literally be fulfilled 24/7, so in a sense they are soft or flexible constraints as well.

Returning to the hypothetical example that we have invoked throughout this paper, we might ask now, what alternative is there to an OT view of the scriptures? If one tenaciously contends that commandments such as Eph. 5.22–24, etc., are meant to be inviolable, what is the Christian wife to do? She can fulfill these verses by submitting to her husband, but only at the expense of disobeying other injunctions such as Hebr. 10.24–25, etc. Furthermore, it can get even worse than this; what if the husband tells her to completely denounce her faith, or murder some innocent bystander, or…? Given the political climate of religious persecution in some countries, these are not completely outlandish propositions. Scenarios of this type present a moral dilemma. We contend that in such situations, disobedience to some commandment(s) of the Bible is unavoidable. One advantage which OT offers us in this context is *freedom from (inappropriate) guilt*. In phonology, the most universally unmarked word is probably [tata]; all other output forms violate at least one markedness constraint.[6] Thus, every word we speak violates some linguistic constraints. Similarly, in real life, just as in phonology, the optimal choice is sometimes not absolutely perfect, but rather one which simply does the best that can be done, given the circumstances. Often we must violate one commandment or constraint in order to do better on certain others. What ultimately determines the best candidates for us, both in linguistic grammars and in ethical applications, is the hierarchy or ranking of the relevant constraints. With respect to the Bible, only God knows for certain what the complete and correct hierarchy is. Nevertheless, with the knowledge available to us, one small piece of a scripturally based, OT view of life might be characterized by the following constraint rankings:

(6)   God   >>   spouse   >>   children   >>   other human beings   >>   self

One small confirmation of the scale in (6) is that in the list of the Ten Commandments, those which relate to God appear before those which relate to other people. In applying the general hierarchy in (6) to our daily lives, it must be emphasized that in OT, all constraints are universal forces or tendencies which only hold true *when all else is equal*. Thus, there may be a more specific constraint which falls in the middle of (6) and thereby has the apparent effect of a local reversal in a particular situation. For example, on the one hand our relationship with our spouse is higher than that with our children since we are married for life whereas our children will eventually grow up and go their own way. On the other hand, we simultaneously have a duty to defend, protect, and provide for our children in a way that we don't have to for our spouse, who is (hopefully) a mature adult capable of looking after him/herself. To summarize the paper thus far, we certainly do not wish to claim that *all* of the commandments in the Bible are intended by God to be potentially violable, but some of them at least have to be.

We are now in a position to provide a novel, precise, and OT-driven definition of moral failure or "sin". We begin by emphasizing our belief that it should always be possible, in any given situation, for

---

[6]Ironically, in the Wuvulu language of Papua New Guinea, the word **tata** means 'error' or 'sin'! (James Hafford, personal communication)

someone to choose at least one course of behavior which is not sinful. That is, no matter what the circumstances, it is always the case that we have at least one option available to us by which we can fulfill the moral code we are following. In many cases there are multiple righteous alternatives available. At the same time, however, we have shown that in some conceivable scenarios it is not possible to obey every relevant commandment of the Bible. In other words, in some cases the Christian is necessarily compelled to disregard at least one scriptural constraint. Consequently, sin cannot simply be defined as or correlated with disobedience to a specific scripture (or some other ethical dictum). While it is true that sin always entails disobedience, disobedience in and of itself does not always entail sin! Disobedience is a necessary, but not a sufficient, condition for defining sin. As a result, sin (for the Christian) can now be regarded as choosing a biblically non-optimal course of action. In other words, sin is tantamount to behaving in a manner which can be formally equated with a fatal violation of the Bible's hierarchy of ranked constraints. In principle the commandments of scripture should be correctly ranked in an *a priori* fashion which is the same for all Christians. We realize that in actual practice this is often subject to free variation and individual interpretation. For instance, passages such as Rom. 14.1–23, 1 Cor. 8.1–13, and 1 Cor. 10.23–33 teach us that in certain cases there are valid differences among Christians in the sense that some constraint rankings may be person-specific.[7] Nevertheless, to give one concrete general example, consider again the scenario with which we began this exposition: a Christian wife is informed that her husband does not want her to meet with other believers. As argued above, we posit that the ranking which is most consistent with the Bible overall is HAVEFELLOWSHIP >> OBEYHUSBAND, because this is an instance of loving God more than loving man. Consequently, we can now illustrate two of the most straightforward options available to a Christian wife in this situation by means of a tableau:

(7)

	HAVEFELLOWSHIP	OBEYHUSBAND
a. ☞ go to church		*
b. don't go to church	*!	

Given the crucial ranking of the two most relevant constraints, the option of choice for the wife is candidate (a): go to church (at least on some occasions). While this entails a violation of OBEYHUSBAND, and therefore disobedience to one set of verses, this commandment is ranked below HAVEFELLOWSHIP. Therefore this is not a fatal violation, so the wife has not sinned (assuming that she is operating with this constraint ranking). Hence she does not need to feel any guilt about not submitting to her husband on this detail. If sin were strictly equated with disobedience to any commandment of the scriptures, a wife in this situation would be in the infelicitous position of necessarily having to sin, one way or the other. On the other hand, if she selects candidate (b)—not going to church—in order to completely satisfy the lower ranked OBEYHUSBAND, she thereby violates the top-ranked HAVEFELLOWSHIP. This is a biblically non-optimal or sub-harmonic course of behavior, and therefore we could conclude that a sinful choice has been made.[8]

In this little exercise we have purposely glossed over other logical possibilities for the sake of simplicity. For example, what if a particular woman has these two constraints ranked in the opposite order? And what about the option of gradient violability—partially obeying both constraints at the same time, as

---

[7]For example, Rom. 14.5 says, "Each one should be fully convinced in his own mind." Cf. Rom. 14.14: "But if anyone regards something as unclean, then for him it is unclean."

[8]In light of this definition of sin, it would be interesting to examine some of Jesus' actions which the Pharisees regarded as sinful, e.g., healing on the Sabbath, overturning the tables in the temple, etc. Undoubtedly he was in fact making optimal choices based on the correct rankings of the relevant Old Testament passages.

we alluded to earlier?[9] All of these issues are also important, but tangential to our main objective. Namely, we hope to have given a brief idea of how Optimality Theory can be effectively applied to the task of moral decision making.[10]

4.   Conclusion

Before we finish, we need to emphasize an important disclaimer: we do not presume to imply that OT is a panacea for all of life's problems. The parallel between linguistic grammars and ethical decision making is neither exact nor complete. Not all situations can be neatly compressed into a choice between just two options or two constraints. Nevertheless, to the degree that it is appropriate, OT can help us analyze and unravel scenarios that are potentially quite complex, resolving them in a principled way that is consistent with the individual's conscience. In this sense the arguments we have proffered here can by extension easily be applied to any moral system or evaluative process. The Bible was chosen as an illustration simply because it is familiar to many of us and hence convenient.

As a final detail, we note that in this paper we have not considered whether biblical commands can and should be compartmentalized into the two categories markedness vs. faithfulness. While such an analogy to linguistic constraints is intriguing and potentially useful, we will refrain from speculating on exactly how far this concept can be fruitfully pushed at this time. Nevertheless, we do point out that this would be a very interesting prospect for future research.

References

Geisler, Norman. 1971. *Ethical alternatives and issues*. Grand Rapids: Zondervan Publishing House.

Kager, René. 1999. *Optimality theory*. (Cambridge Textbooks in Linguistics.) Cambridge: Cambridge University Press.

Lutzer, Erwin W. 1981. *The necessity of ethical absolutes*. (Christian Free University Curriculum, Philosophy Series.) Grand Rapids: Zondervan Publishing House, and Dallas: Probe Ministries International.

McCarthy, John J. 2002. *A thematic guide to optimality theory*. (Research Surveys in Linguistics.) Cambridge: Cambridge University Press.

Prince, Alan and Paul Smolensky. 1993. *Optimality theory: Constraint interaction in generative grammar*. (Rutgers University Center for Cognitive Science Technical Report no. 2.) New Brunswick, New Jersey: Rutgers University. To appear, Cambridge, Massachusetts: The MIT Press. (Linguistic Inquiry Monograph Series.)

---

[9]In phonology, it is common practice to allow two constraints to be tied or co-ranked in particular languages. While this is generally considered undesirable, it is nevertheless often resorted to when the available empirical data simply run out before we encounter crucial evidence for the ranking of certain pairs of constraints. Nevertheless, in this specific biblical example, we would argue that co-ranking of these two constraints is *not* a logical possibility. It is impossible for a woman in this situation to satisfy both commandments, just as it would be impossible for her to simultaneously disobey both commandments. The fact of the matter is that in this scenario, life forces her to choose one action or the other: she either goes to church (always or sometimes) or she doesn't (never). These two constraints are thus necessarily in conflict.

[10]The definition of ethical lapse which we have proposed in this paper is compatible with the notion of cultural relativity, up to a point. For example, in one ethnic group stealing may be considered a worse sin than lying, while some other culture may have these two constraints ranked in the opposite order. At the same time, however, verses such as James 2.10 teach us that in a certain sense, all sins are equally bad in God's eyes.

Ramsey, Paul. 1953. *Basic Christian ethics*. New York: Charles Scribner's Sons.

Telushkin, Joseph. 2000. *The book of Jewish values: a day-by-day guide to ethical living*. New York: Bell Tower.

Steve and Mónica Parker
steve-monica_parker@sil.org