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A Biblical and Economic Analysis of Jubilee Property Provisions

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Abstract: *The focus of this paper is on understanding biblical relationships between God, the chosen people of Israel, and the Promised Land. That is done by examining the covenantal relationships between these three entities and considering the economic implications for property ownership, land use, and valuation that result. The objective is to determine how covenantal relationships recorded in scripture provide insight regarding property relationships that are also relevant in contemporary economies. The paper includes an examination of the land and its covenantal context, setting the stage for examination of the economics of land use and land value. It begins by examining land allocation processes implemented within the covenant community. Then, it considers land use both within and without the covenant community noting differences in the law's provisions on land use and redemption rules. Finally, given the institutional context provided by the law and its ownership and redemption provisions, the paper considers simple models of land value and analyzes the economic implications.* JEL codes A13, R14, Z12.

This paper embodies a modest attempt to understand biblical relationships between God, the chosen people of Israel, and the promised land. It does so by examining the covenantal relationships between these three entities and considering the economic implications for property ownership, land use, and valuation that result. The objective is to determine how covenantal relationships recorded in scripture provide insight regarding property relationships that are also relevant in contemporary economies. This is not an exercise aimed merely at understanding the economics of ancient Israel. Rather, timeless covenantal relationships that have implications for the allocation of landed resources and their use in the context of communities form the basis of our economic interest.

Section one includes an examination of the land and its covenantal context setting the stage for later examination of the economics of land

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use and land value. In order to understand the land in covenantal context, we consider the land and Israel's covenantal relationship to God. Then, we consider the integral relationship between the land and the family unit in ancient Israel. Finally, the family unit and Israel's relationship to God is examined and the three sets of relationships are put into covenantal context.

Section two contains an analysis of economic aspects of the land and its use, based on the relationships identified in the previous section. We begin by examining land allocation processes implemented within the covenant community. Then, we consider land use both within and without the covenant community noting differences in the law's provisions regarding land use and redemption rules. Finally, given the institutional context provided by the law and its ownership and redemption provisions, we consider simple models of land value and analyze the economic implications. The final section of the paper contains a summary and conclusions.

I. The Land and its Covenantal Context

God, Israel, and the Land

Figure 1 presents a visual description of the important biblical relationships between God, Israel, and the land, which we consider in this paper. These relationships are embedded within the larger context of the covenants God initiated with humankind as part of his Covenant of Grace. Beginning with Adam in the covenant of commencement (Genesis 3:14–19), God initiated covenantal relationships with humankind. That was followed by a covenant of preservation given to Noah (Genesis 6:17–12, 8:20–22, 9:1–7, 9:8–17). Subsequent covenantal promises of land, offspring, and a unique relationship with God were given to the Israelites through Abram/Abraham, Isaac, Jacob/Israel (see Genesis 15, Genesis 26:4–5, and Genesis 35:9–15, respectively). These promises were extended in the promise of an earthly kingdom given to David (2 Samuel 7, 1 Chronicles 17:3–15), and the promise of complete and final fulfillment of all God's covenant promises in Jesus Christ (Matthew 5:17, Luke 22:20).

The specific promises to Abraham, Isaac, and Jacob involved a unique relationship with God, a land of promise, and numerous descendants culminating with the promised messiah, which are the focus of this paper. Of course, the promises given to the Israelites should be also be considered paradigmatic of God's larger promises to redeem his fallen creation, including fallen humanity, and make all things new. These covenant promises involved three distinct relationships: the relationship between God and his chosen people Israel (AB), the relationship between God and the Promised Land (AC), and the relationship between God's chosen people Israel and the Promised Land (BC). Of course, the mediating human institution that was essential in all three of these relationships was the extended family, or clan. The covenant promises were initiated in the context of extended family units, or tribes, among the Israelites. Wright (1990) maintains that "…these family-plus-land units had a basic role and importance in Israel's understanding of their relationship with Yahweh."

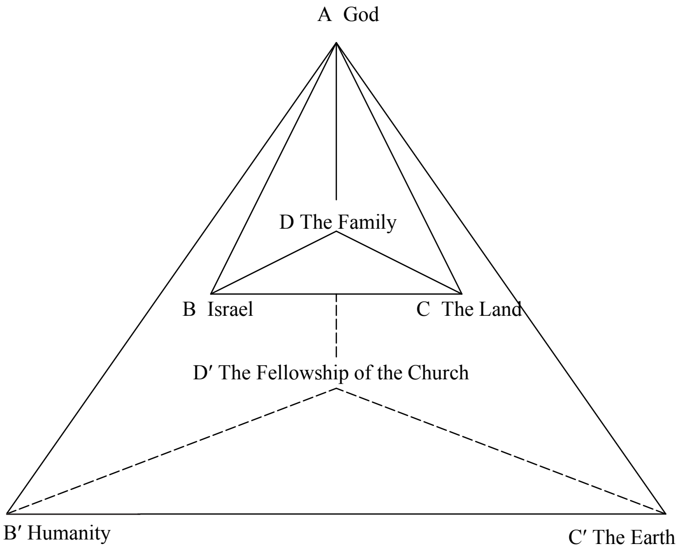
The concept of Jubilee was an important institution by which Israel understood their theological identity and by which God provided protection against economic calamity. It was not merely as an instrument of social justice as it is often characterized. The Jubilee institution, described in Leviticus 25:8–22, proscribed that every fiftieth year (after seven sabbaticals) was to be observed as a year of liberty throughout the land for all its inhabitants (vs. 10). Not only was the Year of Jubilee to be a year of rest, a sort of super-sabbatical, it was also a time when property was to revert to its original owners and debts were forgiven. People were to return to their family clans and the original land allocations provided for those clans. Hebrew slaves, who had been alienated from their family land due to indebtedness or other disaster and had sold their services to landed masters, were freed and returned to their family land. Israelites who had been forced to sell their land got it back in the year of Jubilee. Ultimately, the Year of Jubilee was intended to function as a picture of the redemption and restoration to come with the messiah.

Rather than viewing the Year of Jubilee proscriptions as a means of implementing an egalitarian division of resources, Wright emphasizes the role of the Jubilee institution as the means by which small family-plus-land economic units were kept viable. He summarizes his view of the Jubilee as follows:

> The Jubilee, therefore, has to been seen as an attempt to preserve, or periodically restore, the economic viability and independence of the smaller family-plus-land units. In the light of the importance of these units as the basis for Israel's national relationship with Yahweh, this amounts to far more than an idealistic measure of social justice, but rather is a serious attempt to maintain the integrity of the socioeconomic ground of the nation's theological identity (pp. 124–125).

The family-plus-land units were largely self-contained economic entities with both labor and land being integral and organic elements. Beyond being an economic entity, however, these family-plus-land units

Figure I. Covenantal Relationships



Source: Adapted from Wright (1990) and Wright (1983).

had an important role to play in Israel's understanding of their relationship with Yahweh. The prophets such as Micah (see, for example, the Lord's indictment in Micah 6) later make clear that human events which harm or destroy these units are not merely less than desirable due to their effect on social justice, but more importantly they also harm the socio-economic foundation upon which Israel's relationship with Yahweh was built. Wright summarizes, saying,

> What God did with Israel in their land functions for us as a model or paradigm from which we draw principles and objectives for our socio-economic endeavor in secular society. The fact that Israel was a redeemed community and their land a gift that betokened that status does not invalidate this approach. For the purpose of redemption is the ultimate restoration of God's ideals and plans in creation, ideals which have been polluted and frustrated by the fall. Given the fact of our fallenness, therefore, the only way to a quality life based on the principles of creation is through the experience of redemption and the covenant relationship that follows from it. So in extrapolating from the ideals and institutions of the redeemed people of Old Testament Israel we are not at all denying or ignoring the creation ordinances.

> On the contrary, we thereby acknowledge and establish their abiding validity (pp. 175–76).

This conclusion provides a solid foundation for a serious economic analysis of Jubilee provisions, not merely as an unrealized and highly idealized method of wealth redistribution in ancient Israel, but rather as the foundation for right relationships between God's people and the land.[1]

There is little historical evidence that Jubilee provisions were actually implemented in ancient Israel. Wenham (1979) says that the Year of Jubilee remained an ideal social institution, but it was rarely if ever realized. Indeed, the prophets make clear that Israel's lack of obedience in this regard is one of the reasons for the demise and captivity of both Israel and Judah. Leviticus 26:34 and 2 Chronicles 36:21 indicate that the length of the exile was related to the number of sabbatical and Jubilee years ignored. Isaiah anticipated ultimate release from the enslavement of the exile in terms of the Jubilee, speaking of a great year of release in Isaiah 61:1.

In the first instance, the law provided a system that prevented a family's complete loss of its economic base. Wenham (1979) has identified the main purpose of the Leviticus 25 laws on Sabbatical and Jubilee years to be the prevention of "utter ruin of debtors." Hence, the law provided an institutional means by which families were provided economic protection. They could not be deprived of the ability to care for themselves. If the law was followed, there were protections assured. Wenham recognizes, however, that the Jubilee institution was an ideal that was "rarely, if ever, realized" (p. 318).

Yet, beyond the provision of a sure economic base for the family, there were other aspects of the institution and its implications. Stephen L. S. Smith (2000) has rightly observed that, "…from a Christian point of view Jubilee isn't simply about restoring relationships between debtor and creditor but about restoring relationships across the wider economy as former debtors regain their positions." Redemption is a fuller concept than the mere clearing of accounts. This point is reinforced in a recent study by Schaefer and Noell (2005) who have provided a comprehensive overview of sabbatical and Jubilee provisions. They employ a contract theory view, explaining that the laws would have provided a workable system that would have supported commercial vitality. Confirming the broader economic implications of the Jubilee institution, as suggested by Smith and by Schaefer and Noell, Wright suggests the following four socio-ethical derivatives of the institution:

- The Jubilee existed to protect a certain kind of land tenure.

- The Jubilee existed to counter the tendency for land to accumulate in the hands of a few.
- The Jubilee existed to support the family.
- The Jubilee existed as a safety valve to release the pressure of economic forces on the poor.

These four principles indicate that the Jubilee institution provided a comprehensive economic basis for right relationships between families and the land, honoring God's creation ordinances. Beyond the mere notion of wealth redistribution, as is often the interpretation of the Jubilee, it is clear that the Jubilee institution was intended to assure right relationships between God's people and the land, assure a reliable economic base for God's people, and also to assure an equitable distribution of wealth among God's people.

Blessings and Curses

Those who obeyed the Sabbatical and Jubilee laws were promised a rich blessing, including peace and heavy crops. See Leviticus 26:3–13 and Deuteronomy 28:1–14 for elaborations of the promises. The promise of peace implied the lack of invasion by outside oppressors who might destroy crops or otherwise make it difficult to plant and reap a harvest. The promise of heavy crops is tied to plentiful rainfall and implies a high yield, given the seed and effort applied to the land. It is important to note that these promises make crop yield a function of obedience.

Wenham (1979) suggests that the blessings promised in Leviticus 26 can be divided into three distinct categories: the gift of rain and good harvest (vv. 4–5), the gift of peace, no wild animals, defeats, or famine (vv. 6–10), and the gift of God's presence (vv. 11–13). First, the gift of rain at the right time is critical to the development of a crop and an eventual good harvest. The timing of adequate rain is the key that determines the output of the planted crop. Second, food without security is of little use. Invading enemies can capture the stores of food, depriving the country of its output. The gift of peace assures either the lack of attack, or easy defense in case of attack. Along with peace there would be adequate food and growth in population, which would be a fulfillment of the covenant with Abraham (vs. 9, Genesis 17:6). The third and final promise is the gift of God's own presence (vs.11). God promised to tabernacle among his people. He repeatedly promised as the goal of his covenant, "I shall be your God, and you shall be my people" (Genesis 17:8, Exodus 6:7, 29:45–46, Leviticus 11:45). God also promised curses for disobedience (vv. 14–45, with five specific curses listed: General warnings (vv. 14–17), drought and poor harvests (vv. 18–20), wild animals (vv. 21–22), war (vv. 23–26), war and exile (vv. 27–39). In these curses, the converse of each of the blessings is described. The lengthy list of curses serves as a reminder of what life is like without the providential care of God.

Sabbatical Provisions

The Sabbath year was a real test of faith for the Israelites. Would God's promise by trustworthy in light of the uncertainties of foregoing a year's crop? Deliberately not planting crops one spring, knowing that there would be nothing to harvest the following fall, was a severe test. The Israelites were asked to trust God for provision. Leviticus 25:20 asks and answers the question "What shall we eat in the seventh year?"

Several possibilities suggest themselves. First, consider the option that the Israelites were asked to trust God to provide a sufficient amount over the first six years, so that there would be enough to tide them over the seventh year. By this view they were to expect seven-sixths of a crop each year for six continuous years—an average of nearly 17 percent more than they needed each year. If they were diligent to save the extra one-sixth of a crop each year over the six-year period, they were assured of having enough for the seventh year. That would be a reasonable and rational way to think about the sabbatical provision, putting the focus on human responsibility to save each year in order to provide for the seventh year. Another option would be to farm six-sevenths of the land area each year, leaving one-seventh fallow. By rotating the fallow plots over a sequence of seven years, the Israelites could have accomplished the letter of the sabbatical law, letting the land rest every seventh year. This approach would have required the Israelites to work every year, however. While such views of the sabbatical cycle are feasible, indeed rational, they miss the fundamental spiritual truth embodied in the concept of the Sabbath.

The Genesis account of creation makes clear that a pattern of work and rest is fundamental to God's plan. That pattern of work and rest is replicated in various frequencies from a daily pattern (evening and morning), to a weekly pattern (six days for work and one for rest), to two distinct yearly patterns including both the seven-year sabbatical and 49-year Jubilee patterns. In the sabbatical pattern in particular, we do not have a planned saving mechanism over the first six years to carry the Israelites through the seventh year. Furthermore, we do not have a crop rotation schedule that permits the land to rest, but not the people. Rather, we have a pattern requiring radical dependence on the creator-sustainer.

A careful reading of the law indicates that the Israelites were to expect an unusually productive crop in the sixth year, sufficient to carry them through until harvest in the eighth year. Wenham (1979) says that

> The idea of a bumper crop to last three years in the sixth year may strike the Westerner as fanciful. But if the timing is miraculous, the notion of large variations in yield is not. The size of the harvest is determined by the timing and quantity of the rain during the growing season. Both factors can change dramatically from one year to the next in Israel (p. 320).

Of course, we do not need a mere rationalization of how God's provision could have occurred. The God who provided manna in the wilderness in a dramatic way (see Exodus 16:4–35, Numbers 11:6–10, Deuteronomy 8:3,16) with an increased yield on day six in order to provide for the seventh day of rest is the same God who promised sufficient yield in year six in order to provide for year seven. It is also useful to recall that the manna in the wilderness could not be stored over night—assuring daily dependence and faith in God. In the same manner, the sabbatical law was clearly intended to both require and build faith in God.

Land Division

Scripture records the territorial division of the land into tribal areas in Joshua 13–19 with additional details provided in Numbers 26. The land division boundaries in these passages are generally regarded as authentic descriptions of the land division among Israelite tribes in the pre-monarchic period. Several important observations must be made regarding the land division process recorded in scripture. First, it is apparent that while the allocation of land area was partially related to the population of each of the tribes, it was by no means an egalitarian allocation. Both in terms of land area and in terms of the features and attributes of the land, tribes received differing allocations.

The Levites were not allocated land, as were the other tribes of Israel. Rather, they were allocated forty-eight towns with surrounding land for pasture for their flocks and herds. See Numbers 18:23–24 and Leviticus 25:32–34. Walton, Matthews and Chavalas (2000) report that assigning towns to priestly control had precedent in the practice of Egyptian and Hittite rule. In those cases, some cities were designated as royal estates and placed in the hands of the priests who administered the cities. In Egyptian practice the cities were typically fortified and the priests collected tribute or tax revenue from the region. Similarly, in Mesopotamian and Syrian practice designated cities had royal pasturelands associated with them. There is some speculation that while there was no secular administrative role played by the Levites in these cities, they may have been centers for both religious instruction and the collection of temple revenues.

Six of the Levitical cities were to serve specific roles as cities of refuge for persons who had committed unintentional homicide. By this solution God provides a means by which the accused is given asylum and the so-called blood avenger is prevented from killing him.

Property Provisions

While land allocated to families of other tribes could not be sold in perpetuity, a house in a walled Levitical city could be sold. The provisions found in Leviticus 25:29–34 permit a one year redemption period, but after that time "...the house in the walled city shall belong in perpetuity to the buyer, throughout his generations; it shall not be released in the Jubilee."

What accounts for the different treatment of the land allocated to non-Levitical tribes and the houses in walled Levitical cities? It would appear that the material difference is the ability of the land to produce crops to feed the people. God protects the productive capability of the land with strictures against family loss of the productive asset, but he permits sale and purchase of non-food producing assets in walled Levitical cities. But, why is the land not sold in perpetuity, while houses in walled cities can be bought and sold in perpetuity? Wenham (1979) speculates that the reason houses in town were not subject to Jubilee release is that, "…perhaps because even in those days redevelopment was fairly rapid in towns." Houses in Levitical cities were treated differently, however. Since the Levites were not allocated any land, their ownership of houses in cities is given special treatment. If they had been permitted to sell off their houses, with no guarantee of redemption in the next Jubilee year, then they could have been deprived of their homes altogether. The law in Leviticus 25:32–34 assures them ownership of their homes.

One explanation provided by commentators for the different treatment of land and houses in walled cities is that the houses do not provide crops and thereby assure food and a livelihood. While this explanation has merit, it does not seem to do justice to the radical difference in treatment of land and houses. A more satisfying explanation is found in the realization that God is the perpetual source of livelihood in his provision of the land, but the houses are simply man-made creations that provide shelter. Hence, the fundamental difference lies in the source. Since God provided the land it is treated differently than houses that are mere capital improvements attributed to man's effort. By this interpretation, the essential issue in sabbatical and Jubilee provision is God's provision and covenant blessing.

Mere human constructions are permitted to be bought and sold since they do not command the same respect as God's land.

In addition, there is a difference between houses that depreciate over time as they wear out, and the land that does not depreciate. Furthermore, a house is occupied by a family for a period of time, and eventually passed on to another family. There is no God-ordained house allocation comparable to the family-based land allocation recorded in scripture. These perspectives reinforce the conclusion that mere human constructions are permitted to be bought and sold since they do not command the same respect as God's land.

Table 1 summarizes the property provisions found in the biblical texts. Four types of property are delineated in the columns of the table, while three important rights related to the property are given in the rows of the table.

Table I. Summary of Property Provisions

	Land	**Houses in walled cities**	**Houses in villages without walls**	**Houses in the 48 Levitical cities**[2]
Sold in perpetuity?	No	Yes	No—classified with fields of the land.	No (not to non-Levites)
Right of redemption?	Yes	Yes, but only for one year	Yes	Yes (by Levites)
Returned in	Yes	No	Yes	Yes

The land was not sold in perpetuity, was subject to the right of redemption, and was returned in the year of Jubilee. This represents the strongest set of property rights provided in scripture, for the family given the original land allocation, assuring the family an important economic base. Houses in walled cities had broader set of transferable property rights. They could be sold in perpetuity, included a right of redemption limited to just one year, and were not returned in the year of Jubilee.

Property Rights, Markets, and Land Use

The fundamental starting point in consideration of land value and land market operation is to consider the rights embodied in land ownership. In our contemporary setting we are accustomed to think of property rights in ways that are fundamentally different from the situation described in the Old Testament scriptures, however. God made it clear from the start to the

Israelites that he was the ultimate owner of the land. Land tenure in Israel was based on the concept of the inalienability of the land, as promised by God. Land was held in a kind of patrimony and did not pass out of the family. This institutional arrangement was supported both in law and in theology. Practical aspects of inalienability are discussed later when we address the Year of Jubilee and methods of redemption.

Examples of land transfer or sale in scripture describe non-voluntary situations. Consider the following three cases:

- Kinsman-redeemer, e.g. Jeremiah and Ruth
- Sale by non-Israelites, e.g. David's purchase of the threshing floor of Araunah the Jebusite for 50 shekels of silver (2 Samuel 24), and Omri's purchase of the hill of Samaria from Shemer for two talents of silver (1 Kings 16:24)
- Non-voluntary sale or mortgage of land due to debt, as in Nehemiah 5:3.

It is also worth noting that the concept of inalienability of property rights in scripture is not consistent with the common perception that the land in ancient Israel was held in common with periodic redistribution within the tribes.

Implications for Economic Analysis

This biblical analysis of property provisions provides a starting point for economic analysis. With the taxonomy of property types listed in Table 1 and the corresponding restrictions on use and transfer of property, we can begin to think in economic terms about the implications for land use and property valuation. In the next section we consider each type of property and the ways in which the biblical restrictions on ownership and transfer had an impact on the use of the property and its value. Our interest is in examining the ways in which biblical property provisions had economic implications that reinforced biblical truths essential to the life of ancient Israel, and also speak truth for contemporary economic cultures.

II. Economics of Land Use and Property Valuation

In this section we wish to examine property values, land use, and the implications of various redemption provisions of the Jubilee mandate. Using the property provisions summarized in Table 1, we explore the economic implications for property valuation and land use first, then briefly consider implications for redemption. While there were no fully developed property markets in ancient Israel, as we know them in contemporary market economies, the property provisions outlined in scripture had clear implications for property value and land use.

Property Values and Land Development under the Jubilee Mandate

The various types of property listed in Table 1 provide a convenient way to also think about property values. Appraisal of the value of a parcel of land in ancient Israel hinged critically on whether the land was held within the family clan or was valued temporarily with redemption at the next Jubilee in mind. A parcel held within the family clan was held in perpetuity, with an explicit expectation that rights to use the land were granted by God and could not be alienated from the family. In this context, the land provided benefits in perpetuity. The discounted farming net income stream to a family using their land in perpetuity is simply the present discounted value of the net income stream. In the special case of constant farm income with $f(t) = f$ for all periods t, we have the case of a perpetuity and the farming value of the land is simply $F(t) = f/r$. Of course, this value becomes infinite as the interest rate approaches zero. Hence, to a family unit that retains rights to the land over the long-term, the land has very high value. Note, however, that the value of the land is conditioned on the family retaining rights to the land. In this sense, the biblical witness properly conveys the sense that since the land belongs to God, whose provision of productive land for the family-clan is permanent, the value of that asset is very high indeed. It is easy, therefore, to understand how transfer of the land would not be possible, as no one would have the wealth to purchase such an asset.

Appraisal of land value for the purpose of paying a debt, with the anticipation that rights to the land would be returned at the next Jubilee involves a fundamentally different process. The value of a parcel of land at time t, given that the next Jubilee occurs at time J, denoted $V(t,J)$, where $t<J$, was simply the discounted present value of the net income $f(t)$ generated by the crops harvested on the land until the next jubilee.

Whether a non-zero discount rate r was used in this valuation is not explicitly specified in scripture. While a full treatment of biblical teaching on interest is beyond the scope of this paper, we must at least consider what interest rate may have been implicitly used in property valuation. Two possibilities are immediately apparent given our knowledge of the general permissibility of interest charges in the Old Testament scriptures. First, we know that interest charges were permitted for loans made to non-Israelites, hence the above valuation would apply. Second, we also know that interest charges were forbidden on loans made to fellow Israelites.

Consider Nehemiah's anger regarding the charging of interest of fellow Israelites (Nehemiah 5:7). His anger was kindled to the point that he brought charges against the nobles and officials involved with charging interest on such debt. An assembly was held and Nehemiah convinced the lenders to abandon the practice of charging interest. Without interest, the valuation equation $V(t, J)$ would be modified by setting $r=0$. The value of the land is then simply the non-discounted stream of net income generated by the crops grown on the land.

Valuation of a house in a walled city under the Jubilee mandate was a different matter. A house in a walled city could be developed or purchased and held in perpetuity. That development occurred is self-evident. Capital was applied to land and housing was produced. Ancient Israel consisted not only of nomadic herders and subsistence farmers; it also included developed cities and villages. A house in a walled city had value that depended on a complex set of factors, including the time at which the property was developed. Basic models of land value such as those in Anderson (1986, 1993) and Turnbull (1988) can be used to model house value in this context.

Suppose that an Israeli landowner has land generating a net income stream described by the function $f(t)$. We can think of this as the farming net income generated by the land. Suppose that at time period $t = D$ a net income stream can be generated by a developed use of the land with housing construction. The net income stream generated by the developed use of the land is captured by the function $h(t, D)$. This net income stream includes the amortized cost of construction. Including D as an argument in this function permits the developed net income stream to depend upon the time that development occurs.

Discounting at the rate r, the value of the property prior to development, $t < D$, denoted $V(t, D)$, is the sum of the discounted net income stream $f(t)$ from time t to D plus the discounted net income stream $h(t,D)$ from period D onward. Notice that undeveloped land value depends upon the farming net income stream reflecting the farming use of the land up until period D. After that point, however, the value of the land reflects the developed net income stream. Hence, the value of undeveloped property depends upon a mixture of net incomes due to pre-development farming use and to the developed land use. Once developed, $t \geq D$, the value of the property is simply the discounted present value of the net income stream $h(t, D)$ from period t onward. We can denote this developed value of the property as $H(D)$.

When would the house in the walled city be built? Using the standard result in the optimal timing literature, as in Anderson (1986) and Turnbull

(1988), we know that the first order condition for optimal timing of land development is:

$$H'(D)/H(D)=r-f(D)/H(D),$$

where r is the discount rate. This condition specifies that at the optimal time, the marginal benefit of waiting another period, given by the rate of increase in the developed value of the property, must be equal to the marginal cost of delaying development reflected by the discount rate, adjusted for the pre-development farm net income that period. In the absence of pre-development income, $f(D)=0$, this rule collapses to the familiar Wicksellian conclusion that development should occur when the rate of increase in the value of the asset equals the interest rate. Hence, it would have been sensible for the owner of a space in a walled city to build a house at that time when the rate of increase in the value of the property in housing use was equal to the interest rate.

Given the opportunity to charge a positive rate of interest of a non-Israelite, the optimal timing issue is a straightforward application of this condition. If constrained to a zero interest rate, however, the space in the walled city would likely never be developed.

Valuation considerations are also important to consider in the context of land redemption, the terms of which were provided in Leviticus 25. We turn to that issue in the next section.

Land Redemption in Three Stages

Land redemption as part of the Jubilee process included three possible situations, reflecting increasing stages of poverty. Consider the Jubilee laws proscribed in Leviticus 25:23–28 (ESV):

> [23] The land shall not be sold in perpetuity, for the land is mine. For you are strangers and sojourners with me. [24] And in all the country you possess, you shall allow a redemption of the land.
>
> [25] If your brother becomes poor and sells part of his property, then his nearest redeemer shall come and redeem what his brother has sold. [26] If a man has no one to redeem it and then himself becomes prosperous and finds sufficient means to redeem it, [27] let him calculate the years since he sold it and pay back the balance to the man to whom he sold it, and then return to his property. [28] But if he has not sufficient means to recover it, then what he sold shall remain in the hand of the buyer until the year of jubilee. In the jubilee it shall be released, and he shall return to his property.

Based on this description of the law, we know that there were three situations that applied to the sale of land by an impoverished Israelite:

- Recovery of the property by the Israelite's kinsman redeemer (v. 25);
- Recovery of the property by the Israelite himself as he later obtains the means of redemption (v. 26–27); and
- Recovery of the property by the Israelite himself at the next year of Jubilee (v. 28).

The value of property to buyer in this context is subject to potential redemption at a future date. In the first two cases listed above, the value of the land is simply the discounted present value of the net income stream until the date at which redemption occurs. In that case the value expression would be analogous to that suggested above, except that it is not the year of Jubilee that is the upper limit of integration, but rather the period of redemption. The potential value of the land to the buyer is then dependent upon the buyer's assessment of the likelihood that the land will be redeemed at a future date and the expected date of redemption. In the case of recovery at the next year of Jubilee, the previous model suggestion applies exactly.

Redemption is not deterministic, however, except in the case of the year of Jubilee. With stochastic redemption, further thinking is needed as to how we may model the fundamentals of land prices in ancient Israel. The stochastic concepts used in the models of Capozza and Helsley (1989) and Capozza and Sick (1994) may provide a starting point for analyzing these biblical redemption provisions. What must be included is an option value based on the possibility that a redemption option is exercised.

III. Summary and Conclusions

A covenantal understanding of the relationships between God, his chosen people Israel, and the promised land provides a context for a fuller appreciation of the important institutional relationships between resources and basic social units. Scripture gives us essential insight into the importance of embedding access to productive resources within fundamental social units such as families. This insight is foundational and has not received due attention either in Christian theology and ethics or in the discipline of economics.[3] Our typical concerns for property rights, ownership, and resource use do not due justice to the complex set of interactions that are essential in a biblical sense.

An economic analysis of land allocation both within and without the covenant community also provides us with insight regarding the essential role of landed resources. Scriptural distinctions between essential productive land and inessential house lots point toward a fundamental role for landed resources within family units. Furthermore, those distinctions have important implications for the value of the landed resources. It is no surprise to the contemporary economist that the value of the landed resource reflects the importance of that resource within the social context.

Beyond these important scriptural lessons, there are three primary implications of a covenantal understanding of the promised land and the economic use of land in that context for contemporary economies. First, a stewardship perspective is required in light of God's ultimate ownership of resources. When we acknowledge that God ultimately owns his creation, we must take on the biblical role as stewards of his estate. That stewardship perspective means we will be concerned with efficient use of resources, applying our understanding of economic efficiency conditions, their institutional application, and their limitations. Second, we should work to establish institutional means of providing resources for basic social units. Understanding the covenantal relationships between God, his people, and landed resources, leads us to a fuller comprehension that basic social units such as families are important and must have the advantage of access to resources. Finally, we must work to establish markets for resources that operate within covenantal contexts. The powerful market mechanism must be used to allocate scarce resources within an institutional framework that recognizes covenantal relationships.

Endnotes

1 Mason (1987) has provided the most insightful economic perspective on Jubilee provisions and their contemporary implications to date. He argues that the contemporary equivalent to the Jubilee assurance of access to the land is the assurance of access to education and the development of human capital.

2 See Numbers 35:1–8 on the establishment of cities for the Levites. A total of 48 cities were given to the Levites, including 6 cities of refuge and 42 other cities. Cities were taken from the other tribes in direct proportion to their population.

3 While Schaeffer (1970) provided a starting point on this topic, too little serious economic inquiry motivated by Christian sensibilities has emerged subsequently. If we take these implications seriously and develop more comprehensive economic models within which to understand the intent of covenantal relationships, we can begin to move beyond the often naïve evangelical Christian views on resource use and stewardship.

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