

RELATING JESUS' TEACHINGS TO THE GENERATION AND USE OF INNOVATION

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1 Introduction

Innovation is something new, an idea or object, a new product or method, way of performing an existing task, of achieving a particular end. In business, innovation is generated by entrepreneurs who manifest inquiry, astuteness, dynamism, creativity, vigour, even restlessness, qualities, among others, regarded as spurs to innovation. Minniti (2003, 13) puts it that “innovate is what entrepreneurs do”, being people who “are naturally gifted at seeing opportunities where others do not”, they have “a gift for entrepreneurship” (Rundle and Steffen, 2003, 145), for turning ideas into, “something of value that people want or need” (Hustedde, 2007, 39). A comparable definition of entrepreneur is “a person who habitually creates and innovates to build something of recognized value around perceived opportunities” (Bolton, 2006, 12). This close relation between entrepreneurship and innovation has long been recognized. Thus, Drucker’s 1985 observation — that “innovation is the specific instrument of entrepreneurship. It is the act that endows resources with a new capacity to create wealth” — is still quoted in the literature (e.g. by Dabson, 2007, p.22). However, researchers/technicians can also be innovators, and not all entrepreneurs are innovators.

Business innovation and entrepreneurship might seem to have little to do with Jesus’ teachings. A contrary view is argued here, taking common ground with Claar and Klay (2007, 21) that “it is hard to think of any Christian principle or value that is irrelevant to economic activity.” The case is that Jesus’ sayings have intrinsic implication for discovering new ideas, and how they might be used. Jesus’ admonitions relevant to ascertaining new knowledge are explored, including their bearing on business operation. The argument is that the triune God provides normative guidelines or principles meant to govern the quest for knowledge and its use. In this paper, just three of these principles are examined, as expressed by Jesus. They are highlighted by the

headings below of *Becoming aligned with the purposes of God, Maintaining a persistent relationship with God, and Good innovation is to be shared*. A selection of Jesus' sayings relevant to them (from the New Revised Standard Version of the Bible) is discussed, as interpreted by biblical exegetes.

It might be objected that a methodology of relating Jesus' teachings to areas where they were not directed is flawed. The defence against this charge is the assumption that Jesus' sayings have multiple and diverse implications with eternal significance. Thus, if it can be deduced that Jesus favoured greater equality in the distribution of income and wealth (as, say, Forrester, 2001, pp.93-97), then *ipso facto* it might be reasonable to anticipate that Jesus had things to say about multifarious areas, including how new knowledge might be garnered. The problems of moving from the New Testament to the modern business world are complex, but insufficiently so to vitiate the inference that Jesus' teachings are meant to be, and can be, related to the contemporary world. To avoid the charge that the interpretations made here of Jesus sayings are too simplistic and undeveloped, those interpretations are as given by cited academic Biblical exegetes. It is *their* interpretations relating to new knowledge and innovation that speak to the issues canvassed. The authors of this paper rely on the exegetes, and their interpretations are related to new knowledge discovery and use. In every instance of Jesus' sayings examined, inferences seem to be derivable for new knowledge discovery, that apply both then and now. Innovation is not a product of the modern age. Therefore, the methodology adopted here need not be thought of as hermeneutically problematic. Jesus' sayings relate to numerous dimensions of new knowledge discovery. Only by investigating the range of Jesus' teachings can these inferences be teased out.

The disciplines of economics and business have also developed their own explanations on how best to achieve innovation. Although some comment is made below on how innovation is viewed in these disciplines, this paper is not a comparison of Jesus' teachings related to innovation with that taken by modern business and economics. This is mainly because Jesus' ideas differ so dramatically from how secular mind-sets view the stimulants to innovation, that little headway is made in trying to compare Jesus'

teachings with secular notions of innovation generation. A separate paper would be required to tease out the differences adequately, but this is not achieved by the brief discussion in the next section. Notwithstanding Jesus' three normative principles discussed here, innovation will still be generated. Some can be "bad," meaning innovation not conforming to, or used consistently with, God's intentions. Good innovation can also be produced, even disregarding Jesus' admonitions.

2 Christian and Secular Thinking about Innovation

Part of the difference between the two ways of looking at innovation (by Jesus and by secular mindsets) is that all innovative development and use is not consistent with God's purposes or values for humankind, some of which are mentioned below. However, God does not prevent people from behaving inconsistently with His designs, from producing/using wrong and incorrect new ideas, products etc. God does not take away human free will. If He did, and all people behaved as God desired, human freedom would be curtailed, and evil outside the natural world would not exist. To be of worth to God, however, new discovery and knowledge, and its use, should conform to the values God desires to encourage in humans and in the societies they create. For instance, one of God's aims is directing wealth to help improve the lot of the poor through providing them with jobs, and thereby reducing the gap between rich and poor. Sharing wealth around is likely to generate more jobs for the poor than individuals/corporations amassing it (Pilgrim, 1981). Discovery and innovation with this orientation is part of the wider task of trying to "articulate a set of Christian principles and values needed to undergird economic and social action in order to produce a just and prosperous society anywhere in the world" (Claar and Klay, 2007, p.10).

Since Jesus recognizes that the devil is the ruler of the world (Jn. 14:30, 16:11), re-emphasized by John (1Jn. 5:19), every likelihood exists that the devil can affect both the nature of innovations produced, and how they are used. Gunpowder can have socially beneficial uses, as in mineral development. But it can also be used in socially detrimental ways, as in warfare. The internet is a purveyor of useful information, but also of deception, and other evil, such as fraud, incitement to violence and pornography. It

seems reasonable to say that God wants the socially beneficial uses, and the devil the socially detrimental. Thus, the use of innovation can have a dual nature, one emanating from God, the contradictory from the devil. The case here is that if more people practised God's precepts, the influence of the devil would be reduced. Only by people maintaining as close a relationship as possible with the triune God can these evils be countered. The problem is part of the broader one in societies embodying secular safeguards encouraging innovation, but that do not guarantee, "that the values of the kingdom of God are advanced in human history" (Claar and Klay, 2007, p.24).

While all of the economy is to be God's, this state has not yet been attained. That is, aspects of the present economy are ungodly. We do not know how much of this economy is ungodly, because God's common grace always applies. Nevertheless, we can see aspects of the contemporary economy of which God surely disapproves, such as the (legal) pornography and prostitution industries. Even in more benign industries, unless business people conduct their lives and work in cooperation with God, they run a high risk of making decisions (innovation included) that may not conform to God's desires. Recent experience in the finance industry is an example of this distortion. Economic decision making ignoring God, we label as the secular economy.

This highlights a second difference between Christian views toward how new knowledge consistent with God's intentions might be developed, and approaches to innovation taken in the secular economy. The didactic teleology of normative biblical teaching suggests that for innovation (and every other aspect of economic, social and personal life) to be produced more as God and Jesus intend, people need to live in proactive interrelation with the triune God. God seeks all people, not only Christians "to conduct every aspect of their lives in response to the call and grace of God in Christ" (Claar and Klay, 2007, p.15). The generation and use of right and correct new ideas — those conforming to God's purposes— depends on people behaving in particular ways toward God. The biblical evidence proposes that this mode of living incorporates high reliance on prayer for developing one's personal relationship with God, and on participating in the life of the body of believers (the church). It requires studying scripture and theological deduction from it to reveal what God is calling humans in

principle to practise as His preferred modes of behaviour. It requires sharing these insights in the church and the world, and applying the principles to personal and social life, both between believers and in the wider world.

The claim that Jesus' teachings are vital to new discovery and innovation might be dismissed on the grounds that innovation seems to be achievable without recourse to God's assistance. Probably a majority of innovators, business and otherwise, do not actively seek the triune God's help. After all, even Jesus points out in Mt. 5:45 that God, "makes his sun rise on the evil and on the good, and sends rain on the righteous and on the unrighteous." Again, notes Jesus (Lk. 6:35), God "is kind to the ungrateful and the wicked." All people appear to be candidates for God's blessings. But dismissing God from the innovative process on these bases ignores that all people — unbelievers and believers — are made in the image of God, whether people are conscious of it or not. Since God has designed people to live and work with Him, it may be that the human mind does not operate without input from God. This might be wired into the brain itself and/or transmitted on an unconscious spiritual wavelength. Perhaps common sense and rational thinking ability function on this basis. Perhaps also the unexpected, inspirational breakthroughs of which innovators speak are mind-shaking spiritual bolts-out-of-the-blue from God (or from the devil for bad innovation). This is not inconsistent with suggesting that humans are also constructed that they can ignore and reject the triune God and His teachings in their decision making. However, God gives people choice whether to seek consciously to encourage His assistance in their thinking processes, or to ignore it. If people choose to ignore the availability of God's help, He does not stop them from exercising the thinking abilities He has given them. In this latter mode, people's brains work less effectively — effective meaning operating less reliably and consistently with the will of God. Rational thought still functions and innovation beneficial to humankind is still achieved. That all persons are made in the image of God includes the ability to create new thoughts, ideas and things. Both Jesus' teachings and secular approaches toward new discovery encourage hard work and searching for alternative solutions to a problem. Both recognize that new innovation may be generated from the use of existing knowledge, that, in its turn, leads to new knowledge.

If we believe that all Christian principles or values are relevant to economic activity (as per Claar and Klay, above), certain hypotheses suggest themselves from the above paragraph. It is assumed that the bulk of economic decision making currently occurs without actively seeking God's cooperation. As above, this is termed the secular economy, although God's common grace still applies. One hypothesis is that innovation and its use in the secular economy will not be as helpful to humankind as if it were produced in active partnership with the triune God. If people sought their innovations and guidance for their use in cooperation with God, socially more beneficial patterns of innovation and use would be generated than occurs currently. This is an *a priori* assertion stemming from the beneficence of God's rule. The experience of the secular-dominant economy does not provide data to test this hypothesis. For instance, an implication from the existing secular economy might be if protections to innovators were reduced, the rate of innovation might decrease. Thus, if patents were abolished, it may be that "medicine would simply not advance as quickly as it does currently", and "would also slow the rate at which we learn how to save lives" (Claar and Klay, 2007, p.81). This is a contested conclusion, discussed further in the penultimate section, but it cannot be taken to apply to system-wide God-driven innovation, although, again, this hypothesis is not testable for the existing economy.

3 Jesus' Sayings Potentially Bearing on Innovation and Their Implications

3.1 Becoming Aligned with the Purposes of God

Jesus says and does much about newness and discovery. Jesus "challenged the *status quo*, took risks, thought differently from the traditional religious leaders and gathered a team around him" to expound His teachings (Bolton, 2006, p.6). He is the archetypical social entrepreneur whose innovation turned established thinking on its head, encouraging people into new ways of seeing, and putting new wine into new wineskins. Principles inherent to Jesus' undertaking can be unfolded. A first precept Jesus stresses for ascertaining new knowledge, seeking to accord with God's values, is that petitioning or requesting God is necessary before starting the search process by which new knowledge might unfold. Petition to God is a preferential precondition for discovering

new knowledge. God promises to respond positively to our prayer requests. In so far as entreaty is usually part of habitual prayer life, petitioning God can be thought of as contained by the normal course of prayer. Jesus invariably appeals to God in His prayer as a prerequisite for determining His own future actions, including the knowledge on which to base them. Jesus promotes this model to people in their own undertakings. This mode of operation could not be more different from secular approaches to decision making seeking to solve some problem or gain new knowledge. At the extreme, the benefits and costs of alternative future actions might be assessed in this *modus operandi*. The problem with the secular approach is that the benefits and costs can never be fully recognized or measured. Future knowledge is too uncertain. Depending on God for the starting insights is counter-intuitive to the secular approach, and probably prone to dismissal by secular mind-sets.

God's promised positive responses to human prayer requests are emphasized in a number of Jesus' sayings in the Gospel of John. For instance, Jn 14:12 has Jesus telling his disciples that "the one who believes in me will also do the works that I do and, in fact, will do greater works than these." Again, in Jn. 14:14, Jesus explains that "if in my name you ask me for anything, I will do it." Even though all of Jesus' sayings are multi-dimensional and possess implications far beyond those discussed here, these statements nevertheless contain inferences for doing new things, including ascertaining new knowledge and innovation. The interpretations by biblical exegetes of Jn. 14:12-14 are consistent with this understanding. Lincoln (2005, pp.392, 393) explains that faith in Jesus will enable the disciples "to do difficult or seemingly impossible things." This is because "it is Jesus who will be at work in the mission of his followers," so that "whatever you ask ... means whatever you ask in line with Jesus' prayer." Thus, disciples' prerequisites to achieve the seemingly impossible are faith, prayer requests conforming to the purposes of God, and that will manifest God's glory.

Asking in Jesus' name in Jn. 14:12-14 "is praying in accordance with everything the name of Jesus stands for," for the purpose of Jesus' continuing work through His disciples is "*to bring glory to the Father*" (Kanagaraj and Kemp, 2002, p.323; original emphasis). With these qualifications, Beasley-Murray's interpretation (1987, p.254) is

that “the believer in Jesus ... will have power to perform the works such as those done by Jesus,” while for Keener (2003, p.947), “disciples should do miraculous works through faith.” To reiterate, however, the “alignment of one’s desires and purposes with God” is what is implied by “praying in Jesus’ name” (Kostenberger, 2004, 433-434). On this basis, “in some respect every believer ... will be able to participate” in performing miraculous signs,” for “whatever believers do must be done in the name of Jesus so that as God is glorified in Jesus’ work, they will do mighty works in Jesus’ name” (Burge, 2000, p.394). Comparable sayings by Jesus at Jn. 14:26, 15:1-7, and 16.23-24 contain similar inferences as the interpretations above of Jn. 14:12-14. They all speak of Jesus’ promise to believers to achieve extraordinary things if they pray with faith that their achievements will mirror the glory of God. This promise applies to believers seeking to undertake innovation, where this “attaches primarily to our part in God’s plans” (Kruse, 2003, p.302). Once again, entrepreneurs/researchers who work outside these forms of assistance, say atheists or those who ignore God, may achieve new discovery but there is a high risk that it will not accord with the will of God.

The positive response promised by God depends on the extent of our faith in Him and Jesus, and on our expectation that God will respond according to His will, not our own. This idea is reflected in the Parable of the Withered Fig Tree (Mt. 21.18-22 = Mk. 11. 20-24), where Jesus explains the achievement potential of faith to the disciples, that “whatever you ask for in prayer with faith, you will receive.” For Mt. 21:18-22, the prerequisite of faith “is to limit the granting of requests to the will of God,” that “all must be related to the purposes of God” (Hagner, 1995, p.606). Christians whose prayer petition encourages them to believe that God is calling them to pursue innovative ideas must remember that “all our prayer requests are subject to the proviso ‘Not my will but thine be done’” (Hare, 1993, p.244). With this qualification, “miraculous power” [will be] available to the disciples to fulfill their calling,” and “disciples should exercise faith for what is naturally impossible” (Hagner, 1995, p.607; Keener, 1999, p.905). This is “about as dramatic an illustration as one could conceive of God enabling us to do that which seems humanly impossible” (Blomberg, 1992, p.318). Of course, the import of the parable extends well beyond innovation, but whatever the context, “if God directs [His

disciples] to move a mountain, God will supply the power for it to be accomplished” (Wilkins, 2004, p.694). Even though Jesus encourages this approach, the correct solution will not necessarily be revealed immediately by the process. Petitioning, praying to, and entreating God to show a way forward, solve a problem etc. still involves hard work and experiment. Patience is needed in working with God, for His discovery and timing are not necessarily ours. Only God’s will is relevant to discovery, “only that which is good and fruitful, saving and merciful will endure. Indeed, “nothing that stands in the way of God’s salvation will stand” (Long, 1997, p.239).

The discussion above suggests that the first stage on the road to Christian-based discovery and innovation consists of three steps. First, petitioning prayer is required. Second, prayer has to conform to the will of God. Third, God’s response depends on our faith in Him. These points may not appear remarkable, and they apply to diverse fields of human decision making. Nevertheless, it is possible that they might not have been thought of as relating to discovering/using new knowledge and innovation. The three steps are just the beginning of the discovery process, however, whose further requirements are below.

3.2 Maintaining a Persistent Relationship with God

If petitioning God is the first step toward innovative discovery, a second closely related and concomitant principle Jesus accentuates for seeking new knowledge is for people consciously at all times to hold their lives in prayer to God who will eventually lead them to right solutions. The petitioning of the first principle above has to be continuous, and this quality is regarded here as a second principle governing the human quest for new knowledge and its use. Here the objective is to maintain obedience and faith that can be thought of as keys to unexpected, unanticipated occurrence, and abundance. This highlights the necessity for a believer to maintain as active an interrelationship with God as possible, despite the constraints of humanity’s fallenness and frailty. An example of a Christian business entrepreneurial innovator who practised this approach was the British film producer/distributor, J. Arthur Rank, who put every business decision beforehand to God, and who produced high quality films (Wakelin, 1996). The more an individual

believer explicitly works on developing her relationship with God, the more one's fragility and propensity to sin can be counteracted. Habitual practice of these approaches (in large degree unique to each believer within broad guidelines stressed in normative biblical thought) seems to be the Judeo-Christian key to achieving new knowledge, and therefore of discovery. Jesus promises that those who live in these ways will achieve much conforming to His purposes. This principle of maintaining a persistent relationship with God as the path to enduring innovation and its translation into entrepreneurial business contains at least six aspects explored below.

First, Jesus requires *persistence* in prayer as a precondition for the assurance that God will respond. This is underlined by Jesus' sayings in Mt. 7.7-11 and Lk. 11.9-13. Here Jesus instructs the disciples to "ask, and it will be given you; search, and you will find; knock, and the door will be opened to you." Jesus' followers should continually bring their requests to God, and not be timid or backward in so doing. This is unlike the presumption that "since God is so holy, perhaps one should keep requests to a minimum and be careful about bothering the sovereign God." Instead, "disciples are to make their requests boldly to God," who will answer them. One does not get "exactly and always what one asks for," but "God supplies graciously in terms of the request" (Bock, 1996, pp.1060, 1061, re Lk. 11.9-13). The abundance of God's response is also important, for as Nolland (1993a, p.632) notes in relation to the Lucan text, "as our Father, God will respond to our requests with more appropriateness and generosity than we do to the requests of our children." Jesus gives exactly the same instruction in Mt. 7.7-11. Disciples are to petition "God with an expectant attitude ... God will respond with 'good gifts'." Indeed, God "always gives good things ... they do not necessarily correspond to everything for which we ask." but "*ask and God will give you [what he deems best]*" (Blomberg, 1992, pp.129, 130; original emphasis). This interpretation is akin to Keener's (1999, p.245; original emphasis) that "God can supply anything to the righteous who seek his purposes ... *Jesus promises his disciples extraordinary power with God.*" One implication of Jesus' sayings here is that "the wisdom Jesus dispenses calls humans to trust themselves and their own judgement less and trust God more" as we ask "for things that glorify God and help us" (Witherington III, 2006, p.158). Jesus' teachings elsewhere

also underline the importance of persistence in prayer, such as the Parable of the Unjust Judge (Lk. 18.1-7).

A second dimension to the principle of continuous prayer, petitioning, and growing faith in God and Jesus is that this is the door that opens humans to *cumulative* discovery. People will receive more and more insight pertaining to the kingdom of God which may also enable further discovery to be developed. One aspect of Jesus' teaching at Mt. 13.12(= Lk. 8.18 = Mk. 4.24-5) — “for to those have, more will be given”— is that increasing insight will be given to the believer by God to understand the mysteries of the kingdom of God, and to receive greater spiritual blessing. Thus, “to those who have this understanding, more understanding will be given,” and this “understanding will abound ... in fruitfulness” (Turner, 2008, p.339; Hagner, 1993, p.373). For Jesus' comparable teaching at Lk. 8.18, “the idea [is] that someone who receives insight will get more insight.” One can “receive the light, by continually responding to it, so as to open the way for more spiritual blessing” (Bock, 2003, pp.746, 747). It seems likely that the mysteries of the kingdom of God will include knowledge conforming to God's will, pertinent to the field in which the believer moves, which may well include innovation seeking.

Cumulative expansion of understanding and practical application of Jesus' teachings also underline the Parable of the Sower (Mt. 13.3-23, Mk. 4.3-20, Lk. 8.4-15). Mt. 13.23 epitomizes the blessings for believers, that “the one who hears the word and understands it; who indeed bears fruit” Hare (1993, pp.153-154; original emphasis). Hare points out that “those who receive the word of the kingdom and *understand* it, that is, appropriate it not merely intellectually but with a commitment at the depths of their being, will ... produce a bountiful harvest in terms of the good fruits of obedience to God's will.” Similarly, Blomberg (1992, p.218) emphasizes that genuine profession of faith in Jesus is indicated “above all [by] the presence of appropriate fruit (consistent obedience to God's will).” For Wilkins (2004, p.481), “the fruit represents ... the outworking of the Spirit in his gifts in the believer's life ... the fruit produced is the outward evidence of the reality of the inward life of the kingdom.” The interpreters are well summed up by Hagner (1993, p.381), that “the word of the kingdom when received

fully and without reservation results in an unqualified, constant, and abundantly fruitful discipleship.” The fruits and this discipleship can encompass believers who strive for new discovery consistent with God’s will.

A third aspect of the principle of developing a persistent relationship with God is that not only do obedience and faith work to encourage innovative achievement, but this commitment to God in belief and action is also a prerequisite for *secure* achievement. “Secure” in the context here is taken to mean innovative development conforming to the will of God and that lasts over time. Jesus’ Parable of the Two Builders (Mt. 7:24-27 = Lk. 6:47-49) brings home these points, starting with Jesus’ words that “everyone then who hears these words of mine and acts on them.” For Bock (2003, p.622), Lk. 6:47-49 means that “anyone who listens to Jesus’ words is in a solid position to resist life’s trials ... to listen to Jesus’ teaching is to provide a basis to stabilize all of life.” With Mt. 7:24-27, the believer has to “build a solid foundation that combines authentic commitment to Christ with persevering obedience” (Blomberg, 1992, p.134). Indeed, “hearing the teaching of Jesus is regarded as genuine only when it is accompanied by doing what Jesus says” (Turner, 2008, p.222). Believing and acting are the foundations to enduring faith and accomplishment, including achieving new discovery.

A fourth dimension of the principle of conscious, continuous living with the triune God can be found in Jesus’ teachings emphasizing that the believer’s basic needs for sustenance will be met, thereby freeing her from anxiety on that score. This assurance allows the believer who always seeks God to direct her attention to formulating new discovery. The risks of new discovery and the entrepreneurship of putting it into practice will not undermine the believer’s needs for basic sustenance. God and Jesus will meet these needs. This promise is underlined at Mt. 6:33 (= Lk. 12:31) where Jesus calls His hearers to “strive first for the kingdom of God and his righteousness, and all these things will be given you as well.” For the Lucan expression, Bock (1996, pp.1164, 1168) explains that “God’s commitment to disciples is to offer care, to provide fundamental things such as food and shelter.” This applies as long as the disciple seeks God’s kingdom, that “God will bless the seeker and promises to care for him or her.” For Mt. 6.33, “God’s provision of our basic needs follows on from the seeking of his kingdom,”

and the “‘all’ ... is meant to be fulsomely reassuring in respect to human needs” (Nolland, 2005, p.314). A similar interpretation of Mt. 6.33 is that “when priorities regarding treasures in heaven and on earth are right, God will provide for fundamental human needs.” Given that “God’s kingdom has already been inaugurated, then believers should expect to receive in this age the firstfruits of its material blessings” (Blomberg, 1992, p.126).

A counter to these promises of Jesus might be that billions of people in the world today are near starving, and no matter how hard they try, cannot achieve the material sufficiency of which Jesus speaks. Perhaps it is the case that people who suffer in this way are victims of not knowing God triune, and therefore do not constantly seek His guidance. Hence the importance of missionary activity. The part of suffering that proceeds from natural calamity depends on Christian explanations for natural evil. For example, it may be that the devil seeks to wreak havoc in the natural world (as well as the social). Again and as well, it may be that the natural world to date has a partial autonomous, unredeemed existence awaiting God’s re-creation (as Paul points out). Christian explanations for *social* evil as distinct from natural evil are multi-dimensional; for instance, one dimension is the exploitation of the poor in underdeveloped countries by minority rich power elites. None of these qualifications tell against the truth of Jesus’ promises in the preceding paragraph, but they do reveal that powerful forces are at work against the triune God.

A fifth aspect of the principle of constant relationship with God is that the nature and magnitude of innovative accomplishment does not depend on believers having enormous faith— but on faith itself — for great things can be accomplished even with little faith. As Jesus emphasizes in Mt. 17.20 (= Lk. 17.6), “if you have faith the size of a mustard seed ... nothing will be impossible for you.” For Lk. 17.6, Bock (1996, pp.1383, 1390) points out that “a little genuine faith can accomplish marvelous things,” that “faith’s presence is more crucial than its quantity. Jesus is essentially saying that God can do a lot with a little trust.” Similarly, for Green (1997, 613), Jesus suggests “that just a smidgen of faith would be sufficient to give rise to practices even more extraordinary than those he has just outlined.” Hagner (1995, p.505) underlines for Mt. 17.20 that “just

that small amount of faith has unlimited potential and through God's power makes everything possible ... with the smallest conceivable amount of faith, the possibilities are limitless." However, these possibilities must be directed to the needs of others, for "Jesus own example declares that those who truly have intimate relationships with God in faith act in compassion for others' needs rather than exploiting power frivolously" (Keener, 1999, p.442). That is, for new discovery to be made in God's power, it must reach out to the needs others have. In this way, God's kingdom will be extended.

Finally, a sixth dimension of the principle of maintaining a persistent relationship with God is that good innovation and its use will reflect God's glory. Not only should the quality of the innovation render this judgement clear-cut, but the innovation has to be displayed publicly to enable the assessment to be made. As well, thanksgiving to God by the believer/innovator is part of the process of continuous prayer. These precepts are found in Jesus' saying at Mt. 5.16, "let your light shine before others, so that they may see your good works and give glory to your Father in heaven." In this way, "a disciple should be as obvious as a city set on a hill." At the same time, "while Jesus is opposed to doing good works publicly for one's own honour ... he exhorts his disciples to do those good works publicly for *God's* honour" (Keener, 1999, pp.173, 175; original emphasis). In the same way, "Christians must let their good works shine before the rest of the world so that others may praise God" (Blomberg, 1992, p.103). Praise of God is the prime motive of action and new discovery. Hagner (1993, p.100) expresses it that "to let one's light shine is to live in such a way as to manifest the presence of the kingdom ... the good works entailed ... are connected with the glorifying of the Father in heaven."

In summary, therefore, the second principle that might be drawn from Jesus' teachings to encourage and generate new knowledge and activity consistent with the will of God is for believers to maintain a state of constant and persistent relationship with God. To reiterate the six dimensions of this principle: First, Jesus promises that God will respond positively to these prayers. Second, persistent prayer is the key to cumulative attainment from God. Third, secure and lasting achievement is to be attained by this mode of prayer. Fourth, believers who practise prayer in this manner will find their basic sustenance needs met by God. They can be freed from anxiety on this score, and devote

more time and energy to seeking new knowledge. This will pertain to the kingdom of God as long as innovation-seeking activity conforms to the will of God. Fifth, innovative achievement depends on having faith in Jesus and God, not on any particular magnitude of faith. Sixth, good innovation will reflect God's glory, for this is the only motivation with which believers should undertake discovery.

3.3 Good Innovation is to be Shared

A third principle that might be deduced from Jesus' sayings is that good innovation is meant to be shared. It is not sufficient for an innovator to appropriate disproportionately to herself the initial, major or long-term benefits of good innovation. Generosity to others on the part of the innovator is required (as it is required by Christians in all spheres of life). This precept *does* appear to have application to the manner in which much secular innovation is generated. For instance, the secular concept of user-centric, democratized processes building an information commons, as the growing trend for innovative development (Von Hippel, 2005), has close relation to Jesus' teachings on sharing. It also has affinities with the paradigm of open innovation (Chesbrough et al., 2006) that emphasizes the role of internal and external ideas to the firm as a stimulant to innovation.

Jesus' teachings on these matters are contained in Mt. 7.2 = Mk. 4.24 = Lk. 6.38, that as Luke expresses it, "give, and it will be given to you. A good measure, pressed down, shaken together, running over, will be put into your lap; for the measure you give will be the measure you get back." The needs of the other person are always to be considered. As Nolland (1989, p.304) interprets Lk. 6.38, "we are to extend openhanded generosity to the other person. He who extends such generosity may do so in confident expectation that he will be the beneficiary of God's superabundant generosity ... His good measure is a generous measure, packed full and overflowing." God will repay the unselfish disciple/innovator beyond his/her expectations (that, of course, need not be monetary), and sharing innovation in this way generates even more abundance. Stein's (1992, p.212) interpretation is that "God will bless believers not just in equal proportion to how they give to others but far, far more — superabundantly!" Of course, "the major

blessing is intimate fellowship with God,” but “to the generous, God is generous” providing an overflow and abundance “that comes with generosity” (Bock, 2003, pp.608, 607). Note that Jesus in these sayings is not confining the need for generosity to be extended only to the diligent and hard working. In a business context, any business with which one has dealings is to be a candidate for one’s generosity.

The Golden Rule also has implications for diffusing innovation. If we assume that Christians would want their businesses to continue in the face of competitive innovation, they should do to others as they would want done to them. Thus, they should not activate an innovative development that might impair the functioning of other businesses. Instead, the innovation should be shared cooperatively and diffused among those businesses. Contrary to secular wisdom, the most secure way of maintaining employment via business is for innovation to be widely disseminated, so that all may emulate and develop it through systems of hard work, effort and good management. Keeping an innovation secret or patenting it does not meet this criterion. Mt. 7:12 (= Lk. 6:31) expresses Jesus’ Golden Rule that “in everything do to others as you would have them do to you; for this is the law and the prophets.” As with the paragraph above, the disciple/innovator waits upon God’s generosity. To Keener (1999, p.248; original emphasis), Mt. 7:12 means that “God clearly operates on the principle of reciprocity; thus one must do good to people *in advance* of their doing good to one, trusting God to reward one later.” Or, as Blomberg (1992, pp.130-131) expresses it, “in view of God’s generosity to us, treating others in the manner we would like ourselves to be treated is the least we can do.”

The overriding criterion is how we are to treat others, not how they treat us, nor how their behaviour is manifest, say, via laziness, inefficiency or ineptness. It does not conform to this thinking that a system in which all innovation was shared indiscriminately with no opportunities to recoup costs or be rewarded for unusual diligence would encourage inefficiency and laziness. Even though innovators might have borne the risks and costs of their innovation, they are still required to extend its benefits to the other. As the paragraph above noted, open-handed generosity to the other will be rewarded by God’s super-abundant generosity. Resources will become available to the

innovator to pursue further innovation. Further, “despite the provocations of hurt, insult, and material loss, provocative acts are to be responded to as though they were instances of neighbourly interaction” (Nolland, 1989, p.302). The Golden Rule is straightforward and practical: “Think of the way that you would like to be treated and then use that as a guideline for how you will treat others” (Wilkins, 2004, p.314). This precept is consistent with the idea of a business person wanting to be rewarded just as she might want other firms to be rewarded, in which the sharing of ideas is a manifestation of mutual generosity.

The implication is that sharing and cooperation with others, concurrently with innovators practising the two principles above, is the key to encouraging more innovation. In this view, the innovation stimulation and diffusion processes depend on collaboration and the free interchange of ideas. This differs from the common proposition that competition is a prerequisite for innovation. However, advocacy of competition does not appear to be compatible with Jesus' normative teachings (Beed, 2005). Instead, and counter-intuitively, cooperation is a requirement for generating innovation and facilitating its distribution. Many secular examples of this phenomenon exist. One was the formation of the Microelectronics Computer Corporation in the 1980s by nineteen U. S. firms, and the comparable European Computer Research Centre, in which innovation was shared between the participating firms (Ricketts, 2003, 414). Another example in the 1980s was the cooperation between Philips and Sony to develop the compact disc. Tidd et al. (2001, 201) explain its success because “the motives of the respective partners were complementary, rather than competitive.” Airbus industries is yet another case in the 1980s, formed between French, German and British firms, developing a commercial large-seater aircraft challenging Boeing's domination of this market. Current instances of US inter-firm cooperation oriented to innovative development include Georgia's state-sponsored Entrepreneur Friendly Initiative, and the Kentucky Entrepreneurial Coaches Institute. Further examples are the Mountain Microenterprise Fund (North Carolina) and the Appalachian Center for Economic Networks, involving networks of microentrepreneurs who assist each other and new business start-ups (Markley, 2007, p.131; Holley, 2007, pp.243ff.).

The examples above are akin but not identical to ideas of social entrepreneurship, with which Jesus' teachings are also compatible. Social entrepreneurship is usually taken to involve "the integration of entrepreneurial and innovative perspectives in developing and taking actions to create social wealth," as distinct from private wealth. The required orientation is seen to be "in spreading the social innovation as widely as possible in order to maximize social change and the improvement of social conditions" (Perrini, 2006, 15, 18). Networking and cooperation are vital to these processes. Jesus manifested these qualities in the sense that every individual person helped by Jesus' teachings and actions contributes to the potential improvement of social conditions. Social entrepreneurial ventures seem to have caught on in recent times and are widespread today. A well-known example is the Grameen Bank in Bangladesh, formed in 1983, but diverse cases exist. The Manchester Craftsmen's Guild, started in Pittsburgh in 1968, the Aravind Eye Hospital in India (1976), and LocalFeed in South Africa (2000) cover a wide range of projects. The San Patrignano community (Italy) is the largest drug rehabilitation centre in the world, with an emphasis on recovery through productive work, while the Sekem farming initiative in Egypt (1977) also stresses social upgrade through work. All these social improvement ventures have gone from strength to strength and seem to conform to the openness and sharing taught by Jesus.

All the examples above are instances of the alleged growing trend to user-generated, rather than manufacturer-generated innovation. In user-centric innovation, users "freely reveal" their innovations — they give up all intellectual property rights to their information that becomes a public good (Von Hippel. 2005, pp.1, 9). "Open source" software development was an important initiator of this trend, of which one case has been the development of the Linux computer operating system. However, this tendency goes back to the eighteenth century iron industry, and is in line with an alleged growing realization among innovators that patents have only limited value. This is a contested claim for the benefits of patents are still assumed without question in the entrepreneurship literature (e.g., Kaplan and Warren, 2010, p.272). The counter assertion is also asserted. For example, Bhide (2009, p.88), who conducted interviews with venture capital-backed businesses, indicated that their innovations "cannot be secured by

patents.” There is also the problem that wide-ranging patents cumulate among competing firms that are unwilling to cooperate, and that it is impossible to determine if product improvements are significant or trivial compared to existing ones. The anti-patent case is in line with the idea that users mutually benefit from sharing their innovations. As von Hippel (2005, p.11) points out, “organized cooperation is also common, with users joining together in networks and communities that provide useful structures and tools for their interactions and for the distribution of innovations.” Many firms/industries seem to exist where “free-revealing” has been practised, including large firms like IBM (West and Gallagher, 2006, p.95). They conform to Jesus’ ideas of sharing information, and cooperating with others, as one step for the generation of further knowledge.

4 Conclusion

Various principles have been deduced from Jesus’ teachings relating to how new discovery and innovation might be generated and how it might be used. A first principle is that becoming aligned with the purposes of God is a desirable way of ascertaining the appropriate forward steps to take in the discovery process. Related to this is a second principle: by maintaining a persistent relationship with God, including constantly holding our thoughts to God in prayer, a solution will ultimately become clear. We might not be able to predict the time line of this process, but eventually the problem will unravel itself to resolution. Six aspects of this second principle expressed by Jesus were discussed. A third principle is that we are not meant to appropriate the fruits of our innovation to ourselves. They are intended to be shared, and God will protect the interests He has for us (what we might mistakenly describe as our own interests) in the process. By the practice of these three principles, the “individual/new value creation dialogic” (Fayolle, 2007, p.8) would be enhanced. Another effect of Christians practising the three principles in relation to innovation is that they would “cause Christians to behave differently in the ‘real world’ than they would without [the] spiritual moorings” of Christ, as Claar and Klay put it (2007, p.21). None of this is to deny that innovation generated on other than Christian principles will still occur, it can be seemingly beneficial to humankind, but it runs the high risk of being innovation and use that does not concur with God’s values. To what degree these latter propensities occur is uncertain. All we

can note here is that a substantial (probably majority) degree of innovation fails in a business sense, as Armstrong (2005), and Franklin (2004) have documented. Whether this high failure rate occurs because this innovation is not generated in God-desired ways, and does not accord with God's intentions for humankind, is something requiring further exploration.

If entrepreneurs were prone to approach innovation exploration on the basis of the three Christian principles discussed here, a higher degree of translation of innovation into sustainable businesses is likely to be achieved. Unlike current innovative outcomes, wealth would still be created but both it and jobs would be distributed widely and fairly, thereby helping reduce the widening gap between rich and poor. This all contributes to God's project of enhancing justice and love, and freedom from oppressive structures. As things stand, only one in ten entrepreneurs "will succeed in creating enterprises that will create significant numbers of jobs and wealth" (Dabson, 2007, p.33). This high failure rate is likely to be reduced by the practice of Jesus' principles. Since "entrepreneurs are innovators who create new products, new services, or new markets which are manifested in new organizations" (Hustedde, 2007, p.42), social and economic benefits are likely to be greater if the new business entities could be maintained. Further, there is growing scepticism in the literature that entrepreneurs are born to success. One summary is that "in general, personality traits research can be said to have failed to produce any consistent evidence as to the existence of unique entrepreneurial characteristics that differentiate entrepreneurs from the general population," that the "school of thought that holds that entrepreneurs possess innate personality traits" (Lyons et al., 2007, pp.105-106; Fayolle, 2007, p.53) is not compelling. This leads to the idea that perhaps principles for encouraging entrepreneurship could be developed and taught. Not that the secular literature acknowledges *Christian* principles, but at least the Christian faith can recognize that it does possess principles from Jesus Himself pertinent to fostering innovation and its use.

Typically in the secular literature, the precepts Jesus expounds above are neither mentioned nor assumed to be prerequisites for innovation. Instead, innovation is usually seen as deriving from researchers/entrepreneurs who possess certain natural personality

traits, such as inquisitiveness, critical thinking ability, acumen, verve, risk-taking ability and energy that they are able to exercise in appropriate environments. Whether entrepreneurs are born or made, it is rarely acknowledged that such qualities derive from God and can be enhanced by relationship with Him. Leaving God out of the assessment consolidates the implicit belief that entrepreneurial innovation consistent with humankind's progress has nothing to do with God, is achievable without God, and that God has no interest in the process or outcomes, all assumptions contradicting orthodox Judeo-Christian belief.

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