

Towards an Eco-Theology of Fisheries Management?

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Abstract. This paper discusses the potential contribution of an eco-theology to the management of marine resources. The claim of the Christian gospel is that God has a plan for everything in the universe and we are to live to bring it about. The Hebrew/Christian world view is significantly different from naturalism and humanism, the prevailing Greek world views in natural resource management. Three biblical paradigms are examined with insights into key elements in the management of fisheries: dominion; regulation and valuation and caring. In dominion we see the strength of mankind's rule over other species, including fish, misused. Fisheries management generally fails to reign in this driving force, rewarding greed while calling for restraint. Regulation and its impact on mindsets and behaviour, is a theme evident in the Old and New Testaments - entering the promised land, keeping the law and caring for others, both humans and fish. The biblical view also emphasises life, death and resurrection as the process seen in nature. New fishery management paradigms may only develop after old ways and attitudes have died. Significant attitudinal change is essential to improve fisheries management and to achieve new management arrangements. Improved fishery stewardship may require "a new fisher", relationally mature and societally accountable, to achieve the goals of sustainable fishery management through a variety of policy paradigms. The Christian world view promotes such attitudinal change to improve stewardship through reconciling issues in our relationship with God, neighbours and nature. It is worthy of further investigation.

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Psalm 104 v 24 -30 (NIV)

24 How many are your works, O LORD! In wisdom you made them all; the earth is full of your creatures.

25 There is the sea, vast and spacious, teeming with creatures beyond number-- living things both large and small.

26 There the ships go to and fro, and the leviathan, which you formed to frolic there.

27 These all look to you to give them their food at the proper time.

28 When you give it to them, they gather it up; when you open your hand, they are satisfied with good things.

29 When you hide your face, they are terrified; when you take away their breath, they die and return to the dust.

30 When you send your Spirit, they are created, and you renew the face of the earth.

Introduction

In this paper I wish to investigate the potential contribution of the Christian faith worldview to solving fisheries management problems. I give the quote from Psalm 104 as an illustration of the wonder of the ocean creation and as an example of a world view. This is Hebrew poetry written in approximately 1000BC. In this passage the claims of the writer, King David, are that God created the earth and seas; David regards all life as God's property; recognises the sea has innumerable living creatures and that watching whales play is pleasurable! The fluctuations of sea life are seen as God's hand opening and closing, the Spirit coming and departing, God's Spirit renewing the face of the earth.

In this we see wonder of the marine environment, property rights, a querying of the appropriateness stock assessments, and whale watching. The explanation of marine life "here today and gone tomorrow" captures perturbations in the marine environment, defining life and its ebbs and flows as attributable to God's spirit giving life. God as progenitor.

On presenting this account to a group of seasoned Management Advisory Committee members in the Australian fisheries management scene, I was surprised at how well they identified with the passage. A long term industry advocate, battle scared from years of interaction with government process, suggested I *"keep reading the answer might be over the page, we've tried everything else"*.

The fishers statement is the elementary hope that in the pages of "the good book" we might find a specific answer. The passage also illustrates how a theological worldview can give another perspective, different to those used in scientific worldview of much of fisheries management. These illustrate issues in interpretation of the biblical text and I tread warily in this area, as recommended by Bratton (1984). Theology generally takes a systematic approach to issues and this paper is an attempt to apply biblical principle to fisheries management issues, rather than a structured theology.

The bible indicates God has intentions for the whole universe, including humanity and fisheries. Taking biblical elements and incorporating them onto modern fisheries management paradigms may be flawed theological interpretation - the tail wagging the dog. I recognise that what I am attempting should be more than the interpretive mistake of *"taking our own point of view, our own philosophical interests and ignore the context of the writer and the Hebrew world view"* (Bratton, 1984, p197). Whether I can achieve this or not on a first attempt remains to be seen!

What is eco-theology?

The overview of eco-theology is given by Susan Bratton and Calvin De Witt in these conference papers. Eco-theology examines environmental issues within the context of the intentions and purposes of God. In the Christian tradition God is seen in His revelation of Himself in nature and through Christ.

World views are very much at the core of perspectives in eco-theology. For example the "western mind" of the last two centuries is an inherently Greek worldview and has been the dominant thought paradigm in papers on the economics of fisheries management. This perspective emphasises *reason*, is highly *categorical* (A, B, C,Z), searches for *perfect* solutions, being derived from Platonic thinking (Birch, 1993). The biblical and eco-theological worldview is significantly different from that of the "western mind". Interpretation and pre suppositions become a major issue.

The Christian God

In the Hebrew-Christian world view God is an infinite spirit, personal, revealing himself to mankind through the creation (His works) and Christian belief of the revealing of His son, Jesus Christ and the scriptures (His word). Creation is seen as God's work and speaks to us of the transcendent God - *"in all, through all and over all"* (Ephesians 4 v 6) - *"in him everything lives and moves and has its being"* (Acts 17 v 28).

The worldview sees God's sovereign governance limiting evil by an imposed futility in nature and life and a process which is evident in the natural world - death and resurrection; the seed has to die before new growth and harvest can follow. Jesus explains the Kingdom of God as "biogenic", held alive as belief in hearts of people relating to God, and growing into a great tree. It is inherently nature focused, but Christians in the protestant tradition have not had a strong natural theology fearing pantheism (God worshipped in nature).

Greek thinking has influenced theology and incorporated the dividedness of the enlightenment mindset, often proposing a categorical conflict and incompatibility between faith and reason. The wholism (God in everything) of at least 2000-3000 years of pre-enlightenment thought has been eroded. The Christian recognises that humanity is prone to be conquered by unbelief and division and people hide from God who self evidences Himself in nature and who has come in the flesh in the person of Christ. This broken relationship impacts our ecology.

Ecology and meaning

This clash of science and religious world views was discussed by White in Science in 1968. White gives an interesting statement on man and his environment. *"Since the roots of our trouble are so largely religious, the remedy must also be essentially religious, whether we call it that or not. We must rethink and re feel our nature and destiny"* (White, 1968, p69). The unfortunate outcome of White's article is an inference of Christian arrogance in the use of nature.

Francis Schaeffer's 1969 article *"Pollution and the death of man"* indicates the difference between forms of Christian belief and their ecological awareness. Schaeffer notes that Christianity is not automatically the answer to the ecological crisis; *"it depends on the type"*. The platonically split upper and lower stories has pervaded much of the evangelical world view and may not *"have the answer for nature"*. Nature becomes an academic proof of the existence of God with little interest in nature

itself - "look at the mountains, God made them". The real value of nature as God manifesting His majesty in creation has been lost. Similarly excesses in ultra Calvinism where animals are mal-treated because they don't have souls or heavenly destiny have distracted Christians from their responsibilities in the use and management of nature.

Schaeffer claims that the ecological crisis comes from the moral crisis of man; "*The death of "joy" in nature is leading to the death of nature itself*" (Schaeffer, 1982:p4). Within Christianity today there is currently a realisation and resurgence of the "connectedness with nature" as was expressed in Celtic Christianity, St Francis of Assisi and other church movements in earlier eras. This resurgence leans on recapturing the pre enlightenment Hebrew worldview (Thwaites, 1999).

How can eco-theology contribute to fisheries management?

So can Christian thought contribute to the fisheries management challenge? My dealings with fishers have led me to propose they are closer to the Biblical world view than scientific humanism and the skill set in eco-theology can at least help in bridging communication gaps. Picture the mathematical research stock assessment biologist presenting modelling results to a group of fishers. This is a communication challenge due to a misalignment of worldviews. However stewardship by fishers may be influenced more by the biblical worldview than by the dominant scientific paradigm.

There are many ways to think. The predominant Greek "university" model is a type of thinking monoculture, not sufficiently recognising different human belief and value systems. Solving the fisheries management problem probably requires more diversity and wisdom than evident in late 20th century western thinking alone.

The pitfalls of interpretation of biblical text and analysis are outlined by Bratton (1984). It is an incorrect interpretation of biblical literature to expect specifics of resource management to be hidden in biblical literature. However, principles are evident and within the boundaries of biblical interpretation can be applied to resource management issues (Bratton, 1985).

There are a wide range of biblical themes and principles that could be selected, but I have taken three for illustrative purposes. Others are seen in Bratton's publications in this area and papers at this conference and in McIlgorm (1998).

I wish to take three aspects of biblical thought that may impinge on fisheries management. They reflect my personal choice and fishery interests rather than a universal priority or ranking of importance. I view these as being significant issues in the search for improved fisheries management.

(i) Dominion (Governance)

In the Genesis creation account, mankind is given dominion over the birds, fish and animals and life itself (Genesis 1v26). This strong Hebrew word *Radah* (to tramp down) has been subject to some debate as to its meaning (Steffan, 1992). Originally translated dominion, *radah* refers to rulership characteristics of man in relation to his/her environment. The word domination is the excess of this quality, being a corruption of a relational care and wise rulership required to be consistent with the context of the creation story where man is called to tend the garden and name the animals. Only after the Fall of man, does the compassion and caring become diminished and consideration of others in exploitation is under regarded. A moral tension becomes evident in the rulership of any resource, between personal benefit and community / sustainable fishery requirements.

Dominion has been associated with the arrogant exploitation of resources (White,1986) This may have more to do with the desire for profit than an interpretation of the biblical text (Squadrito, 1979). It has suited others to dismiss the Christian tradition on this pretext (Marshall, 1992).

The interpretation of dominion captures the central moral, ethical and management issues in fisheries use and management. In the dominion concept we see the strength of mankind's rule over life and other species, including fish, potentially misused. There can be a dismissing of the caring relational context of wise rulership leading to exploitation with compassion.

In both open access and managed fisheries where "first in, is best dressed", fisheries management generally fails to reign in this powerful driving force in the individual. God's command was to work and reign over creation, but individual's choose not to constrain their behaviour. The caring may become abusive and deleterious to the environment. Behind the fisheries market failure, and government failure is a moral failure in man's dominion/governance of nature.

A concern with addressing this "rule gone awry", is that the attitudinal characteristics that lead to excess

exploitation are not confronted by many fishery management arrangements. For example, in allocation systems management arrangements usually reward those with greatest catch history through allocation arrangements. This tends to reinforce the "exploit to the maximum" mentality. From working with fishers I suggest that past attitudes may subsequently inhibit the development of cooperation between fishers towards self governance arrangements, inspite of the economic incentives to cooperate. Even economics suggests that "something for nothing" will be undervalued.

The controlling of this "racing behaviour" in individual fishers is at the core of moving fishers and hence fisheries management regimes back from unruly exploitation to sustainable fishing where fishers are content with known sustainable allocated catches.

Biblical accounts suggest God requires each person to manage exploitation in relation to the needs of others. It involves individual choices, attitudes, decisions and taking responsibility. The biblical world view sees domination of the helpless as sin, a breaking of relationship with God. A core principle for fisheries management is the need for transparency and accountability in harvesting so as to protect the creation and its inheritance value to humanity.

In summary, past views of dominion do not sufficiently recognise the sense in the concept of wise rule or governance and the attitudinal significance surrounding this issue. It is a key issue in the behavioural understanding of people in fisheries exploitation and management. Traditionally it has been addressed with regulation. This is another area in which eco-theology has a message.

(ii) The law, rights and responsibility

Fisheries regulation has led to fisheries enforcement being the core of most fisheries management regimes. Regulation and its impact on mindsets and behaviour, is a theme evident in the Old and New Testaments - eg. keeping the law and caring for others, both humans and fish.

The law tends to have an impact on mindsets and leads to "the letter of the law" over riding "the spirit of the law". This was the problem in the New Testament debates, most excellently captured in the book of Romans. The apostle Paul concludes that the law and government are there ultimately "for the reward of those who do right" and "the punishment of evildoers" (Rom.13 v 3 &4), but

that the regulatory mindset tends to lead to dependency on the legislation and does not enable people to move towards maturity, initiative and autonomy, a theme of many New Testament books. How do we get people to act responsibly and maturely when no one is looking?

The story of the Israelites in the wilderness and the difficulties experienced in dumping the old regulatory slave mentality is a useful analogy. On escaping Egypt the people were unable to recognise and reach the qualities needed for wise rulership in the promised land. Only after a generation died in the wilderness did the new generation enter the promised land.

The analogy is the open access fishery mindset which is fed by regulators setting rules. Fishers construct their operations and stewardship within a world of evading capture and keeping rules. This may be a basic stage in the longer process of producing new stewards, but takes time and a lot of it! Today we may be looking at the fisheries regulation tribe in the wilderness, circling, waiting for a new generation capable and willing to enter new sustainable management arrangements where wise rulership, rights and responsibility are the key issues.

The biblical account suggests the strong men who left Egypt did not actually enter the promised land regime. It may take a generation of fishers to pass until new fishers can work with a different mindset, and new expectations and perspective. Numbers 11v4b captures the desire of fishers to look backwards to the days of open access - "*If only we had meat to eat! 5 We remember the fish we ate in Egypt at no cost - also the cucumbers, melons, leeks, onions and garlic*". The complaining fisher under the regulated mindset, harking for the good old days - the taste of open access fishing.

The biblical account suggests that making choices for a better future requires a change to a mind set. Jesus suggests that "*...no man puts new wine into old bottles: else the new wine doth burst the bottles, and the wine is spilled, and the bottles will be marred: but new wine must be put into new bottles.*" (Mark 2v22) This passage infers new paradigms need new vehicles, referring to the replacement of the old covenant with a new living faith.

The biblical analogies suggests fisheries managers may not expect substantial reform of fishery management arrangements, such as the development of self governing regimes, in time spans of less than a generation. The time horizon for social change assumed by fisheries economists is too short and relatively undiscussed. The implementation process and its social and political

dynamic are under addressed in the fisheries management literature.

The biblical cosmology emphasises God's relationship with mankind as a father, and life, death and resurrection as the process seen in nature - the seed dying to release new generations of life. Old regimes may have to die before the new can be revealed. This takes time and great changes in people's mindsets. However this process may be assisted by a spiritually based transformation to promote new thinking which may overlay the imprint of the regulated mindset. Surely there are communities of faith who can work collectively through common faith and belief to manage a fishery better than we are seeing today?

We are constantly seeing the behavioural implications of the regulatory paradigm. Enforcement can be increased and compliance may or may not increase. The New Testament solution to the perverse behavioural outcomes induced by regulation, is simply a change of heart by the individual, that collectively influences society. This takes us to the third theme – value and caring.

(iii) Valuation and caring

In the biblical world, caring and valuation are captured in the concept of love. Bratton (1992) examines the different aspects of love in the relationship between man and the environment and indicates the need for self sacrificing love and caring.

The biblical steward is a person valuing life and having a wholesome relationship with nature. The lack of caring in fisheries use is an outworking of man's internal moral crisis. This internal crisis makes people feel disconnected with their environment (Schaeffer, 1969).

The management of marine resources seeks solutions through policies and reflects the Greek mindset where words, ideas and philosophies are paramount. This may not be sufficiently wholistic (whole, encompassing God). Hebrew cosmology calls for a man, a whole relational person to fill the void and to have wisdom. This is seen in the Messianic concept, a man to bring redemption, rather than a "unified theory of life and knowledge" as sought by philosophers for centuries (Schaeffer, 1969). Most management and rights regimes actually require a whole person to make them successful. Human nature and moral failure is the problem.

The Hebrew/Christian worldview indicates that a key component of the solution to the fisheries problem would be the new person relationally atune to God and neighbour. This would be the steward or environmentally aware fisher called for in most of our deliberations on policy. In New Testament Hebrew cosmology it is the "*whole of creation yearning for the revealing of the sons of God*" Romans 8v28. Nature yearning for people connected to God, able to reflect the majesty of who God is in their relationship with nature.

All of our policy ambitions call for an accountable, responsible, mature and right acting individual aware of their environment and their neighbour. The fisher controlled by regulation or rewarded by "fish rights" after years of selfish exploitation will not really be this desired person. Attitude is important. The implication is that while a right holder may have the rights, they may not act with the attitude of an owner. Hence the desired level of cooperation in harvesting with other fishers does not eventuate as quickly as theory may predict. It may take a generation in the new land to overcome difficulties in exercising power and rulership.

The attitude of the fisher or right holder is important. It is under discussed in economics, assumed away as being inherent in ownership. Is a real person required or will a corporate person suffice? The relational accountability of a corporate person in governance may be less than an actual person as a steward.

For example the situation of fishers gaining ITQs (Individual Transferable Quotas) and then hiring other fishers to take the owner's quota, may dilute the accountability of the steward - "*the good shepherd gives his life for the sheep*" John 10v11 and "*The hireling cares not for the sheep*" John 10v12. This is not an anti-commercial stance, but suggests that a responsible and accountable person with ownership is desirable, rather than hired labour. It depends on attitude and caring which resides in personal choice. Other biblical passages could also support a case where the steward is faithful and the owner derelict. Individual attitude is critical.

Discussion

Can we have a person who does the right thing by the resource when the manager, enforcement authority and other fishers are not there? Every system in management calls for this and labours to achieve it. Outside of solutions dealing with people's internal moral worlds, policy initiatives on economic criteria or even legislation fall short. The achievement of good fisheries

management outcomes has a strong moral and ethical component.

The Christian faith can make a contribution here. Transformation of character is required to produce the good steward. The alternative is to deny the personal nature of these choices and to use the policy frameworks alone to filter and reduce the players in the fishery on economic criteria. However, the relational nature of mankind is such that the moral issues remain unaddressed and are rewarded with futility. The inclusion of relationship with God can make a great difference.

In searching for the role of an eco-theology in fisheries management several illustrations from the Australian and New Zealand fisheries scene are given.

1) *Stewardship and fishery management systems*: Around the edges of ITQ regimes, adjacent high seas fisheries have been heavily exploited given they are outside the ITQ governed area. The apparent stewardship ethic developing through ITQs does not extend to any fish resource outside the system. This is not a desirable outcome. The stewardship ethic takes time to develop and is still a function of regulatory arrangements rather than a change in people.

2) *The new environmental fisher*: In Australian fisheries there are environmental calls for more "responsible fishing" and "stewardship". The ideal steward should be accountable and responsible. The ideal is often approximated by the "*fit and proper person*" criteria for licence holders. It is apparent that the auditing and self regulation of fishers in environmentally sensitive areas is important. Group morality, faith and attitude can assist in this process. It is likely that Christian communities could achieve this provided they are aware of their individual and corporate responsibilities.

3) *Human nature, a brake on theoretical predictions*: In working with fishers in ITQ and share management regimes in Australia, the next step in management is towards self governance. The issues inhibiting this are inherently relational with economic consequences. Fishers may dislike each other, or have formed clans due to past management policies and disputes.

In at least three Australian fisheries where ITQs have been implemented, fishers are not always following theoretical reasons to sell quota, opting to keep it and remain a fisher, rather than letting their neighbour have it by open sale. This reflects the division and highly regulated nature of past management. Such realities of

human behaviour make movement to self governance and new sustainable management arrangements achievable in tens of years and possibly the biblical generation of 40 years. The time frame of the Old Testament world is a cautionary example of the time frames involved in large scale social change.

4) *Adding to the fisheries management skillset*: The achievement of cooperative harvesting arrangements call for a skill set to enable different rights holders to progress. The contribution of science and economics has taken the fishery so far, but the skills set for the self governance fishery manager is managerial in process, but could also be described as *pastoral*; getting people to cooperate around a common set of values and aspirations for mutual gain and progress of a common vision. Individual quotas will not necessarily secure joint action by quota holders.

Managing the self governing arrangement may raise the human issues faced by many a religious minister or pastor; not all are enthusiastic, honest, or willing to conform to the expected norms of the group. The pastoral role is called to confront wrong doing, mediate in disputes and to resolve inevitable conflicts. Failure in these issues may leave legal action as a last option, but this sours the on-going relationship.

This is not to say that there is a defined role for professional clerics in fisheries issues. The point here is the change in the skill set required as we leave regulation behind and attempt to cooperate in self governing structures. For one view of the role of the Christian faith outside the constraints of the church building in the postmodern era see Thwaites, (1999).

Towards an eco-theology?

The initial Christian contribution to marine resource management may be summed up as challenge about attitudes and caring personal choices. In many cases the attitude of fishers from years of regulation with its modified hiding behaviour are inhibitors to moving forward to the economic goals espoused by policy makers. Personal choices are important and have ecological consequences.

Are we moving towards an eco-theology of fisheries management? The nature of the fisheries problem and its centrality to human welfare ensures that many different approaches will be needed to solve it. There is a role for eco-theology in this, but there are significant interpretational issues to be addressed along the way.

One issue is the relationship between systematic theology and ecology. The time may be right to revisit historical roots of natural theology and develop a new natural theology which addresses religion and nature. An eco-theology of fisheries management may then be a subset of natural resource management issues and theology.

Conclusions

The contention of the Christian view is that the key selfish attributes of man and his behaviour in relation to others can be changed through spiritual experience translated into attitudes and action. In the context of the conference this may be a significant *microbehaviour with macroresults*. People of faith should be concerned about fishery and natural resource problems and can contribute to the limited diversity in thinking about ways to achieve resource policy objectives.

There are many potential contributions from the two thousand years of Christian thought and practice that have been developed from working with people of many races, cultures and persuasions. The most immediately applicable Christian contribution is to human attitude and caring. Ecology and faith is an essential element of co-management policy and practice in communities where many years of the Christian faith has influenced culture. The Christian worldview can contribute perspectives that are important in the achievement of sustainable stewardship of marine resources. This area is worthy of further investigation.

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