The Qur'anic Eco-Theology: Seeking Ecological Sustainability Responding to Industrial Modernity Challenges

M. Fathurahman¹, Fata Asyrofi Yahya², Ahmad Natsir³, Hawwin Muzakki⁴, M. Ilham Tanzilulloh⁵, Arif Wibowo⁶, Arif Rahman Hakim⁷, Endrik Safudin⁸, M. Rozi Indrafudin⁹ IAIN Ponorogo^{1,2,3,4,5,6,7,8,9}

{m.fathurahman85@gmail.com¹, asyrofi@iainponorogo.ac.id², ennatsir@gmail.com³, hawwin100@gmail.com⁴, milhamtanzilulloh2@gmail.com⁵, yiss.arif@gmail.com6, arif@iainponorogo.ac.id³, safudinendrik@gmail.com8, indrafuddin@iainponorogo.ac.id³}

Abstract. The issue of environmental damage is a global problem that occurs in this day. Various efforts have been made - from legislation to world level conferences. However, it does not show significant results. It is no longer an ethical-ecological problem. It is an ethical-theological problem. It demands the religion to play a role in finding the solutions. All faiths have views regarding this environmental problem, which generally shows the same level of concern of the earth's damage. Islam, in this case, has the right solution. It is the ecotheology of the Qur'an. Its discussion leads to the need for ecological sustainability to respond to the industrial modernity challenges. Al-Qur'an advocates the importance of responsibility as God's representative on earth by preserving, utilizing but paying attention to its sustainability. Avoiding exploitation causes weather anomalies. Besides that, eco-theology also suggests that a country should also have clear rules to preserve the earth.

Keywords: Al-Qur'an eco-theology; ecological sustainability; industrial modernity

1 Introduction

The history of human civilization shows that one of the causes of the collapse of a country is the degradation of natural resources. Because natural resources are assets that are important for the needs of life and the prosperity of their people.[18, p. 19] The wealth of a country can also be measured through the wealth of its natural resources. Because these resources can be researched, explored, developed and preserved by the state so that they have extraordinary wealth values, a country rich in natural resources requires that its people be rich as well.[19, p. 152] Furthermore, the accuracy of the government in processing resources can provide an example and legacy to the younger generation. It is the moral responsibility as well as a duty to participate in preserving and developing for a betterment. Everything can be ironic when these natural resources are sacrificed only for momentary interests such as foreign exchange where their value is very insignificant for the size of a country[1, p. iv] Sacrificing those resources is the same as mortgaging the prestige of a nation.

Besides, the inclusion of the ideology of developmentalism and the paradigm of industrial modernity, which assume that physical development and economic growth are the main goals.[2, p. 50] It shows that the imbalance that occurs due to reduced equity, such as deforestation, mining exploitation which only "fills up" some circles. Nevertheless, it leaves environmental damage that has a profound impact on local residents. In Indonesia, which Muslim is a majority, there is negligence in examining the primary source of this religion, Al-Qur'an. It explains the importance of respecting natural resources, or on a small scale. It is called the environment. The environmental damage that has occurred or is occurring can be anticipated if one has fully understood the signs in God's words. [20, p. 69]

It is crucial to make people aware - especially Muslims - about the urgency of ecological sustainability and to remind of the dangers of negative industrial modernity amidst the dominant materialism treats. It is an urge because of some reasons. First, *hifdzu al-din*; studying, understanding and practising the Qur'an is the spirit of protecting religion itself. Meanwhile, the practice of His verses in this context can be realized by loving and preserving the environment of the universe. Second, it teaches the younger generation that caring for the earth, protecting the environments are the duties and responsibilities to prepare the resources for the next generation. Because of that, the authors take "The Qur'anic Eco-Theology: seeking ecological sustainability responding to industrial modernity challenges" as the theme.

Based on the explanation, there are some research questions. First is how the ecological sustainability efforts in the perspective of eco-theology of the Qur'an is; second, how the description of negative industrial modernity from the standpoint of the Qur'anic eco-theology; third, how the role of the Qur'anic eco-theology in reducing natural damage in Indonesia. Thus, the objectives of this study as follows. First, it is to determine the form of ecological sustainability efforts in the perspective of the eco-theology of the Qur'an. Second, it is to find a description of industrial modernity in the perspective of the Qur'anic eco-theology. Third, it is to find out the role of the Qur'anic eco-theology in reducing natural damage in Indonesia.

Research on eco-theology is relatively easy to find, both in books and journals printed on campuses in Indonesia. For example, *Islam Ramah Lingkungan (Dari Eko-teologi al-Qur'an hingga Fiqh al-Bi'ah)* by Wardani (2015). In general, this book discusses the position of the Qur'an in solving problems, (a) cosmic equality or the equality of the creation of humans and other creatures (b) theological promise that the Qur'an warns firmly about the need to protect nature, and (c) ecological kufr, the punishment that will be accepted by humans both in this world and in the hereafter due to kufr (renouncing ni'mat) on ecology. Besides, this work talks about *fiqh al-bi'ah*, which initiated the addition of the fiqh area, which is not only concerned with formal legality issues. So the author of the book wants that fiqh is not just an issue of *mahdlah* worship, but must leave the zone, among others, are ecological problems, as a concrete step to answer the challenges of increasingly widespread social issues.

Furthermore, the research conducted by Nur Afriyah Febriyani (2017) is *Inisiasi Ekoteologi berwawasan Gender dalam al-Qur'an*. The focus of this study is the similarity between men and women's roles in solving ecological problems described through the terms protector and conservator. It means that it is not a debatable topic of the social status and responsibilities of men and women, but more to the real task for both of them related to ecology. In short, the elimination of gender stereotype problems between men and women in handling environmental problems. In other words, a moral message that ecological issues must be faced together, not imposing existing gender differences.

The next work is *Ekologi Al-Qur'an (Menggagas Ekoteologi-Integralistik)* by Fajar El-Dusuqy (2008). It contains an explanation of the position of humans and their environment, which he calls the spiritualist-integralist relationship. It means that the role of humans in the

environment is like the role of themselves because humans are part of that environment (ecocentrism). So, the outline of this work is to reveal the human position which is equivalent (complementary and interdependent) with the environment which he calls structural (individual), functional (social) and integral (spiritual) patterns. Although there are some books talk about it, there is no study which discusses"The Qur'anic Eco-Theology: seeking ecological sustainability responding to industrial modernity challenges". Therefore, this research is still new and not plagiarism over previous works.

This research employed a descriptive approach. It tried to dig as deep as possible the sources used. [21, p. 84] Furthermore, because it was based on library data, this research could be classified as library research. It was a study in solving a problem based on a critical and indepth analysis of relevant library materials.[3, p. 61] This study used literary techniques. It extracted the library materials that are relevant to the intended object of discussion.[4, p 234] Meanwhile, Sugiono discussed this technique in another term, namely the documentary technique.[22, p. 329] The way the documentary technique works is by documenting from relevant and mutually sustainable sources. As in terms of Anton Bakker and Charis Zubair, this stage is called the Heuristic stage, namely the activity of finding and collecting data sources from anywhere.[5, p. 81]

The analysis in this study used content analysis. It is any systematic procedure designed to review the content of recorded information. [6, p. 48] Data analysis is done by organizing the data, breaking it down into units, synthesizing it, arranging it into patterns, choosing which ones are most important and what will be studied so that conclusions can be shared with others. Borrowing several terms in Philosophy research, content analysis is included in the interpretative stage category, namely interpreting the findings that have been compiled into writing. The aim is to provide a new picture of the previous conclusions and to try to find connectivity with current realities. The content of this analysis was used to analyze research on the "The Qur'anic Eco-Theology: seeking ecological sustainability responding to industrial modernity challenges". The results of this analysis are the results obtained from the research process.

2 Results and Discussions

2.1 Eco-theology of the Qur'an: Islam is Environmentally Friendly

Islam already has several environmentally friendly arguments that are contained in the Qur'an. However, it is not implemented optimally, even though it is apparent in the explanation by the *tafsir* scholars. Therefore, it is necessary to promote ecotheological studies aimed at responding to environmental preservation and development developments. However, the authors need to explain the ecotheological meaning of the Qur'an clearly to avoid misjudgment. The eco-theology of the Qur'an is in line with the opinion of experts. It is the cosmology of the Qur'an which is studied the universe, the process of events and how to treat it.[1, p. 7] It means that eco-theology use to reveal the ecological side through its verses in the aim of showing the universality of the Qur'an. It is not only talking about *mahdhah* worship, history, sharia laws but also about the environment and how to care for it. So, the Qur'an is indeed a *hudan linnas* (human guide).

This study is essential as the Qur'an has discussed ecology in detail. According to Graham Parkes, there is a view that the accused Islam has a platonic idea with the characteristics that humans are better than other creatures. That's why Islam is (also) called the preserver of the

ideology of anthropocentrism. Toynbee, as quoted by Martin Harun, states that Islam (including monotheism besides Christianity and Judaism) is considered a religion that is permissive to human greed. [23, p. 71] The verses that show the preserving concept of anthropocentrism is the following (QS. At-Tiin: 4): "We have certainly created man in the best of stature". Ahmad Musthafa al-Maraghi explains this verse. It is said that humans are privileged with their intellect to gain knowledge and be able to realize all their inspirations by which humans can rule over all creatures. Humans are also equipped with the power and influence through which humans can reach everything.[7, p. 341]

The Mufassir says that anthropocentrism is very close to Muslims. The opinion that humans are "exaggerated" compared to other creatures becomes a different position that affirms that humans can win themselves over others. It is according to the views of those who think that Islam is an anthropocentric religion, at least. The next verse that discusses anthropocentrism is QS: Al-Baqarah 22: Meaning: [He] who made for you the earth a bed [spread out] and the sky a ceiling and sent down from the sky, rain and brought forth thereby fruits as provision for you. So do not attribute to Allah equals while you know [that there is nothing similar to Him]

In the interpretation of Al-Mishbah it is explained that the word *ja'ala* implies realizing something from existing materials as well as emphasizing that this form can be beneficial to humans. Therefore, the human for whom this earth is spread out must be able to take advantage of the physical, mental, material and spiritual.[8, p. 122] In this verse, there is a word in the form of *nakirah* (indefinite). They are *ma'an* and *rizqan*. These two words make it clear that both of them have broad meanings. For example, when it is called *ma'an*. It means water. Moreover, it does not only refer to rainwater, but also river, sea, or the earth's water. While *rizqan*, it means prosperity. Since it is also *nakirah*, so it is not only what comes out of the rain just like *tsamarat* / fruit, but also whatever is available and spreads out on this earth where all humans can enjoy it.

Based on the above verse, it founds the truth that humans are the best creatures of all. His existence as a creature that has a reason, a perfect creation, and has a number of advantages compared to other creatures makes it difficult to find a gap not to say that Islam also supports anthropocentrism which is not environmental friendly. However, the authors see the experts who argue that Islam is an anthropocentric religion that is less environmentally friendly. They only use an atomistic or partial point of view. It is an unfair way of reading because it risks being wrong. It is because if it is traced more deeply from the variety of interpretations presented by the *mufasir*, it is precisely the opposite of what certain parties are accused. If they read it more thorough, they will find the right solution for the survival of this earth.

In QS. At-Tin: 4, there is an incompleteness in seeing the references used. Besides, the reading method used is still partial. When it is fully viewed, it is easy to find the substantive meaning of these verses. In Al-Maraghi, it is clearly explained about the contents of verse 4, that humans - even though they have the best form - in fact, humans often forget their nature as humans. Often various actions that are contrary to reason – which is markers of perfection as a being – are repeatedly violated. Humans often do things beyond reason and are more concerned with their passions, so that in this position they are lower than other creatures.

In addition, they are many forms of lust which done by a group of people. One of them is collecting excessive property by exploiting nature without considering the conservation. If so, it makes sense that the next verse (5) discusses the existence of humans who create a damage to be placed in a shallow place.

It can be interpreted that humans with the potential of their minds will become the noblest creatures, but on the other hand, when they do not use their minds, they will find a clear threat,

namely hell, this is because humans cannot use their positive potential. It means that human "perfection" also does not apply, so that when embedding Islam is anthropocentric which always "lauds" humans, it cannot always be justified.

In Al-Baqarah verse 22, according to al-Maraghi, humans are indeed given everything they need on this earth. The sprawling land, flowing water from which will emerge all kinds of plants that can be enjoyed by humans. Still, at the same time humans also have responsibility for what is provided by not being allowed to have *andada*, the allies who are likened to God.[7, p. 103] Because the existence of these allies (anything except God, can include humans or leaders of certain people) usually brings up new traditions or rules which are then declared as leaders of very high rank, even it is not impossible to be deified (*taqdis arrijal*).

It indicates clearly that humans also have a demand by this religion so that they not only feel "served and prepared" but also must realize that humans have a concrete responsibility for what God has given to humans. In the context of the environment, in safeguarding the potential that Allah has prepared, there is a responsibility to preserve and protect it as stated in the interpretation of al-Misbah. Therefore, it cannot be said that it is always true that Islam is an anthropocentric religion which then teaches negligence (over-tolerance) that humans can exploit what Allah has bestowed upon humans; nature and its contents. Islam teaches humans to be responsible for every inch of grace that Allah has given to humans.

2.2 Ecological Sustainability Efforts

The ecological sustainability effort in this discussion is intended to embody the ecotheology of the Qur'an. It explains the verses that respond positively to the existence of the environment where it is described as something that is gifted by Allah to the good servant. Furthermore, the authors argue that the verses below can be used to counter-attack the views of some groups outside of Islam, who state that Islam is very tolerant of anthropocentrism that signals human greed.

The verse which state that God has tasked humans to harmonize the earth is below QS: Al-Anbiya: 105: "And We have already written in the book [of Psalms] after the [previous] mention that the land [of Paradise] is inherited by My righteous servants."

Ibn Kathir states that this verse clearly explains the relationship between the verse al-Anbiya 105 andseveral other verses such as Al-A'rof: 128, Al-Mu'min: 51, an-Nur: 55. These verses talk about the provision of the earth and everything in it for His servants who believe, do good deeds and muttaqin. The explanation of Al-A'rof: 128 is as follow: "Said Moses to his people, "Seek help through Allah and be patient. Indeed, the earth belongs to Allah. He causes to inherit it whom He wills of His servants. And the [best] outcome is for the righteous."

Based on Al-Ibriz interpretation, this verse is a response to the previous verse, which tells about the proposals of the pro-rulers of the people who are pro to the power of Pharaoh.[9, p. 449–450] He felt threatened by his power by the attitude shown by the Israelites and the sorcerers who were supposed to defend their existence, they believed in Musa. So Pharaoh threatened to destroy the boy who was born. That is why Musa said as in the above verse that Allah would leave the earth to his pious servants, and not to servants who did damage like him.

Moreover, the implementation of righteousnessis shown by not causing harm and ignoring other moral responsibilities. It is also relevant to Allah's command in QS. Al-A'rof: 56: "And cause not corruption upon the earth after its reformation. And invoke Him in fear and aspiration. Indeed, the mercy of Allah is near to the doers of good."

The explanation of this is clearly explained as in Fathul Qodir's interpretation that the meaning of the impossibility of causing damage on earth by using various methods. It means the level of emergency that must be avoided. As for the prohibition of making damage on earth as follows[10, p. 143]:

First is killing the human soul, second is knocking down the house. The third is cutting trees and plants. Fourth is destroying the river ecosystem. The great thing in this interpretation is the findings or ideas at that time, but it is still relevant to be used today. Thus, it can be understood that Allah essentially gives various gifts in the form of this nature and everything in it "only" to servants who have the criteria of ecological piety. It is because people with these criteria can be considered good servant representations.

2.3 Industrial Modernity

At the High-Level Conference (Summit) held in Rio de Janeiro, Brazil in 1992, there was an international agreement on Sustainable Development. [11, p. 5] It is a response to the frequent occurrence of environmental management which falls into the over-exploitation category and does not favor local wisdom and social culture. The world community from the past and even today still use the barometer that progress or modernity is only measured by physical progress and economic development. As a result, growth is evenly distributed, and the economy soars. Still, at the same time, illegal logging is rampant, decreasing diversity, waste pollution, extinction of animals and the spectrum of disasters is expanding, such as fires, floods to water drought. mIt means that the problem remains the same. It is the lack of public awareness of environmental ecosystems. Some developers violate principles; even the agreement made ten years before.[12, p. 2–5]

The benchmark principles of sustainable development, as well as a source of problems, are 1) ecological dimensions: namely: (a) climate change (b) loss of soil fertility (c) water scarcity. 2) social dimension; namely, the over lapping between the growing population and the increasing need for the economy. 3) economic dimensions; namely the rampant large-scale development that threatens forests and even mountains are no longer a place to produce oxygen.

QS. Al-Isra' 37-38 serves as a reminder that human behavior, no matter how strong, is not worthy of arrogance and destruction. "And do not walk upon the earth exultantly. Indeed, you will never tear the earth [apart], and you will never reach the mountains in height (37) All that - its evil is ever, in the sight of your Lord, detested (38)."

According to Sya'rowi, this verse talks about the importance of being balanced/fair and not overreaching (arrogant).[13, p. 192–194] There is a reflective question which Shya'rowi asserts in his interpretation. It states that our possession from nothing becomes existing and increases every day is nothing but a gift from Allah, so how can you boast about Malik (the giver) and humiliate fellow humans? Furthermore, in the verse *lan takhriqol ardlo* is interpreted as a sign (*ishārah tawbīkh wa taqrī'*) which has the element of humiliating humans who are arrogant and powerful. It reminds him that all human abilities are only a deposit that should not be used to humiliate fellow creatures.[13, p. 195] So, it can be stated that as a *khalifah* on this earth where all ownership, be it a profession, position, position and significant influence which only a grant (gift). Humans are not allowed to destroy and exploit nature, especially for material purposes (industrial modernity).

2.4 The role of the Echo-Theology of the Qur'an in reducing natural damage in Indonesia

To welcome the 2020 National Nature Conservation Day which held on August 10, 2020, all ASN and National Park Office Contract Employees are carrying out waste cleaning activities in the Manusela National Park. In this activity, all personnel totaling approximately seventies were divided into 16 teams tasked with combing garbage with a distance of 2-3 km. Surprisingly, it gets 452, 4 kg of cans, bottles and plastic waste the trash.[14] Humans and nature cannot be separated. They need each other. In Ian Barbour's term, it is called interconnected. Barbour's view is based on the study of ecosystems and ecology, both of which prove their interdependence.[15, p. 282–283] However, in Agus Iswanto's presentation, the discovery of science also faces a major challenge from creationist practitioners and religionists. They assume that humans are the perfect creatures compared to other creatures as embodied in the holy.[16, p. 9] Thus, the consequence of this understanding leads to the perspective that since the human being is superior, they are very vulnerable to exploiting nature.

Maintaining continuity in protecting nature, especially for the welfare of the next generation, is the human being's role. Al-Qur'an states it clearly in QS. Arrum: 41: "Corruption has appeared throughout the land and sea by [reason of] what the hands of people have earned so He may let them taste part of [the consequence of] what they have done that perhaps they will return [to righteousness]."

In Al-Ibriz's explanation, the damage is due to the widespread immorality (behavior that exceeds the limits) by humans which results in weather anomalies, reduced crops and others.[17, p. 1395] So, it is clear that immorality is rampant[7, p. 101] in all forms that transcend the limits of this destruction of the earth impacts the existence of nature. Even so, humans are still allowed to return to the real way or way of life as the verse *la'allakum yarji'un* says.

Therefore, the implementation so that people return to the right path should be targeted. On this occasion, according to Ali Yafie's idea, the most responsible person is the government with all its powers.[2, p. 200] This power is used to repel the perpetrators of environmental destruction, whether from individuals, corporations, agencies, to be immediately disciplined and even punished by the prevailing regulations. The aim is to provide a deterrent effect as well as provide a real picture so that people who have not done environmental destruction are reluctant to do so.

3 Conclusion

Al-Qur'an eco-theology is a discipline that discusses the interrelation of religion (Qur'anic verses) with the universe. The two of them can go hand in hand and produce great solutions for the rampant environmental problems in this world. In this study, the eco-theology of the Qur'an focuses on two terms. They are ecological sustainability and industrial modernity. Based on the explanation, both of them could participate in breaking down the tangled threads of environmental problems in Indonesia.

Ecological sustainability contains the meaning of the verse, which discusses the responsibility of humans as *khalifah fil ardl* with their various duties. They ask to preserve the environment and reject the anthropocentric attitude, which highly doubts the existence of the environment. Industrial modernity contains a verse that discusses the prohibition of human

exploitation for any reason even though the human being has the power to do so. Finally, the government is responsible for enforcing applicable rules to punish perpetrators of environmental destruction. So, it can minimize ecological degradation in Indonesia.

Thank You Note

We would like to express our gratitude for the ICIS organizers who have agreed to publish our work. We also thank IAIN Ponorogo chancellors who have fully supported the holding of this international event. We also do not forget the support that has been given by IKAS (Institute for Religious and Social Studies), a discussion forum for IAIN lecturers who have forged all of our academic knowledge. We also convey greetings from afar to KH Ali Yafie, who has given us all the inspiration about the ideas of *hifdz al-bi'ah*, which then involved in the sixth *maqasid al-syari'ah*.

References

- [1] Wardani, Islam Ramah lingkungan (dari ekoteologi al-Qur'an hingga Fiqh al-Biah. Banjarmasin: IAIN Antasari, 2015.
- [2] A. Yafie, Merintis Figh Lingkungan Hidup. Jakarta: Ufuk Press, 2006.
- [3] Jurusan Tarbiyah, Buku Pedoman Penulisan Skripsi. Ponorogo: STAIN Ponorogo Press, 2012.
- [4] S. Arikunto, Prosedur Penelitian Suatu Pendekatan Praktek. Jakarta: Rineka Cipta, 1996.
- [5] A. Bakker dan C. Zubair, Metodologi Penenlitian Filsafat. Yogyakarta: Kanisius, 1994.
- [6] M. H. Walizer, Metode Penelitian Dan Analisis Penelitian. Jakarta: Erlangga, 1991.
- [7] A. M. Al-Maraghi, *Tafsir al Maraghi*. Semarang: Toha Putra Semarang.
- [8] Q. Shihab, *Tafsir Al Misbah Pesan Kesan dan Keserasian Al-Qur'an*, vol. 1. Jakarta: Lentera, 2002.
- [9] B. Musthofa, *Al-Ibriz*. Kudus: Menara Kudus.
- [10] Asy-Syaukani, Fathul Qodir. CD Room: Maktabah Shamilah.
- [11] M. A. Marfai, Moralitas Lingkungan (Refleksi Kritis atas Krisis Lingkungan Berkelanjutan). Yogyakarta: Wahana Hijau, 2005.
- [12] M. F. Cahyandito, "Pembangunan Berkelanjutan, Ekonomi dan Ekologi, Suistainability Communication dan Sustainability Reporting," *J. Bisnis dan Manajemen2*, 2010.
- [13] M. M. Sya'rowi, *Tafsir Sya'rowi*. Bairut: Akhbar al-Yawm, 1991.
- [14] Balai TN Manusela, "Aksi Bersih sampah di TN Manusela dalam rangka menyambut HKAN 2020," www.menlk.go.id. .
- [15] I. Barbour, Menemukan Tuhan dalam Sains Kontemporer dan Agama. Bandung: Mizan, 2005.
- [16] A. Iswanto, "Relasi Manusia dengan Lingkungan dalam al-Qur'an," *Jurnal*, vol. 6(1), 2013
- [17] M. Bisri, "Ini 'Uqud al-Lujjayn Baru Ini Baru 'Uqud al-Lujjayn," in *Wajah Baru Relasi Suami Istri: Telaah Kitab 'Uqud al-Lujjayn*, S. N. Wahid, Ed. Yogyakarta: LKiS, 2001, hal. ix–xi.
- [18] I. Supardi, Lingkungan Hidup dan Kelestariannya. Bandung: PT. Alumni, 2003.
- [19] A. S. Keraf, Filsafat Lingkungan Hidup (alam sebagai sebuah sistem kehidupan. Yogyakarta: Kanisius, 2014.
- [20] A. Suhendra, "Menelisik Ekologis dalam al-Qur'an," *Esensia*, vol. 14(1), 2013.
- [21] M. N. Hakim, Metodologi Studi Islam. malang: UMM Press, 2005.
- [22] Sugiono, Metodologi Penelitian Pendidikan: Pendekatan Kualitatif, Kuantitatif, dan R & D. Bandung: Alfa Beta, 2006.
- [23] J. Abdillah, "Dekonstruksi Tafsir Ayat Antroposentrisme (Telaah Ayat-ayat berwawasan Lingkungan)," *Kalam*, vol. 8(1), 2014.
- [24] M. A. Fakhruddin, *Tafsir Fakhrurrazi (Tafsir al-Kabir wa Mafatih al-Ghaib)*. Beirut: Dar al-Fikr, 1981.