



When do religion and science meet in uncertainty?



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This study reports on the concept of uncertainty through the words of Agur in the Book of Proverbs about four observed objects, namely the way of an eagle in the air, the way of a serpent upon a rock, the way of a ship amid the sea, and the way of a man with a woman. The approach used to explore those words is the uncertainty theory by Heisenberg and the falsification method by Popper. It can be concluded that uncertainty is one of the themes of the Bible that unites science and religion in a dialogical manner. The finding strengthens the perspective that science can demonstrate and strengthen the Bible narrations through certain themes. The study also shows that the metaphysic statements of the holy book are not always normative and can be accepted as the source of knowledge supporting its own methodology.

Intradisciplinary and/or interdisciplinary implications: This research strengthens the intersection of religion and science. Although the two methodologies are different, there are intersection points where the two can explain and confirm each other.

Keywords: uncertainty law of Heisenberg; Popper's falsification; Bible; science; religion; Book of Proverbs 30:18–19.

Introduction

One of the efforts to engage science with the holy book the Bible is through reading texts of the sacred book from the perspective of science. Although this way is considered partial and cannot be generalised, certain parts of the Bible can be explained based on the law and theory of science. However, we cannot deny that those two are sometimes also contradictory. Research conducted by Chan and Ecklund (2016) shows that even though the science approach has a different methodology in building the truth from the statements of the Bible texts, whether they are scientific or not, a science perspective has been accepted as part of biblical interpretation. Harrison (2006) adds that science had developed rapidly, as discovered in mathematics, new taxonomy, and modern science application in practical life have provided significant contributions to the hermeneutics of the Bible. Therefore, the contradiction between science and religion does not always have to happen. Although each has its unique private space, both can mutually overlap in an area. Through specific themes, science can play a role in explaining or providing legitimation for the statements of the Bible. Furthermore, this applies the other way around. One of the themes proposed in this article is about uncertainty mentioned in the Old Testament (OT) texts.

Uncertainty is not always related to prediction and probability. Many scholars have discussed the studies and results of the research on this topic. The invention of the concept 'ensemble prediction' by Giebel et al. (2007) provides a very significant contribution in the practical domain of meteorology.

Their research managed to develop the ensemble instrument, a short-term prediction system of wind force in the weather prediction in the future, to be able to arrange schedules for trading and planning. The finding of Halkjelsvik and Jørgensen's (2018) research on the concept of the evaluation of cost estimates in economics also has a significant contribution. Both managed to formulate a guideline in evaluating the estimation of probabilistic costs in a budget. The approach calibrates and provides information on accurate prediction in matching the type of cost estimation with the measurement of the selected cost evaluation.

Two previous studies represent several other studies taking the prediction topic in various disciplines. However, the effort to explain the prediction or estimation of more normative materials such as the content of the Bible has never been conducted.

Therefore, this study will specifically investigate the concept of uncertainty in the OT by taking one narration sample in the Book of Proverbs, also known as *Hebrew wisdom literature*. The theoretical exploration applied to conduct the study uses two approaches, namely the concept of

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uncertainty in physics called Heisenberg's uncertainty and the proposal of Popper on the truth testing through his falsification theory.

The narration sample referred to is the words of Agur in the Book of Proverbs 30:18–19. The uncertainty law of Heisenberg is considered appropriate as the theoretical foundation because this law formulates the theory of physics uncertainty up to the quantum level. Seth (2017) states that even though it is invisible, the characteristics and understanding of material objects, such as solid objects, semi-conductor, lasers, atoms, nuclei, subnuclear particles, and light, can be studied. Using this primary thought, the tendency of material things can also be explained up to the atomic level. Moreover, falsification is considered necessary and epistemologically crucial because it can be helpful to test whether science truth that has been accepted generally can be proven right or not. Its gradual perspective in falsifiability, refutability, and testability can strengthen biblical uncertainty explanation in the format of critical rationalism epistemology and empiricism (Harahap et al. 2019).

The content from the Book of Proverbs 30:18–19 is considered appropriate as the sample representing the text of the OT because its content is the literal narration on uncertainty phenomena (Walton, Matthews & Chavalas 2000:569). The early hypothesis that would like to be tested is whether the words of Agur are the metaphysic truth statement, having scientific explanation through the law of uncertainty principle of Heisenberg and passing the falsification method of Popper. If proven, then the theme can strengthen the formation of the science–religion dialogical space. For this investigation, this article is divided into four discussion parts. The first part explains the biblical perspective on uncertainty, as revealed in the words of Agur. The second part is the description of the uncertainty law of Heisenberg followed with the mechanism of Popper's falsification in the following subheading. The last discussion is the philosophical reflection reviewing uncertainty law and falsification perspective. Finally, the analysis is concluded with the studies on the relationship between religion and science.

The words of Agur

The words of Agur are included in the writing group of individual sayings that are unique in the Hebrew wisdom literature and are found in the last part of the Book of Proverbs. There is not much information about the source of this saying. Agur was only known as the son of Jakeh, became one of the wise persons during his time (Mandel 2005:30) and became part of the leadership of King Lemuel in Massa (Pr 31:1).

Agur stated:

There are three things that puzzle me, and even there are four things that I do not understand: the way of an eagle in the air, the way of a serpent upon a rock, the way of a ship amid the sea, and the way of a man with a woman. (Pr 30:18–19)

Those words at a glance seem to express Agur's amazement in describing the phenomena of nature as his observation results. However, Arnold and Beyer (2015:299) argues that those words are more than mere expressions of fantastic description. His words contain several sentences that encourage curiosity and desire to learn things that cannot be predicted in the future. Those are framed in a distinctive language style by the writers in the Middle East called the repetition of numerical resumption (eds. Arnold & Williamson 2005:507). Bartholomew and O'Dowd (2011:98) reveal that Agur seemed to conclude on the results of his observation on the bizarre things happening in the life world on his acknowledgment that all those phenomena have surpassed his understanding as a human. In other words, texts can be seen as an observation result report.

There are four groups of observation seen in the text, namely the way of an eagle in the air, a serpent upon a rock, a ship amid the sea, and the way of a man with a woman. Alter (2010:303) interprets the last observation about the young woman as a challenge in the mind of a man fighting to understand the sexual mystery in a young woman towards her lover that cannot be predicted. Although Agur reported different observation objects, there is a similar pattern in every object, namely the future prediction and the subsequent movement direction. Furthermore, in his report, Agur stated limitations and the expressions of inability to digest and understand how an eagle flies and sets up navigation when roaming vast air space that is borderless; how a serpent designs its direction and aim when slithering on a rock. The same goes with how a ship roams a vast sea in determining its course correctly. Moreover, Agur also wondered about the tendency of a man's passion towards a young woman who is his lover. All those behaviours turn out to be empirical phenomena that cannot be predicted. As found in statistics, there are too many chances and possibilities. This reality leads to the main conclusion that the text supports the theme of uncertainty.

Those four objects if observed as variables are free variables that do not depend on the external influence. An eagle, a serpent, a ship, and the passion of a man are independent and unpredictable. Their movements are very dynamic and cannot be intervened. The decision ultimately lies with the eagle, the serpent, the ship captain, and the man as autonomous objects in determining their ways. Consequently, the effort to do the estimation of direction using the pattern and the last journey trace provides an equal opportunity between a straight line and an extreme change that might suddenly occur. Estes (2005:232–33) explains what happened in Agur's observation is a decision aspect about the future. The biggest mystery lies in what someone or an animal is thinking when determining the course of movement, without depending on the trace that has been made previously. With the use of the curve estimation in the parametric statistical linearity test, does the tendency of the four objects following a straight line have an equal opportunity with the new trend in a graph? (IBM 2011). Agur's observation is a report on possibilities.

Heisenberg's uncertainty law

Werner Heisenberg was a German physics expert who became one of the Nobel Prize laureates in Physics (ed. George 2017:14; Hart 2018:217–20). Physics is a branch of science that builds the theory and explains all things related to the phenomena of nature. The starting point of this science is observation, experiment, and analysis towards empirical phenomena. As the science is under the exact science classification, all theories formulated are also empirical, specific, and proven. The theory can only be changed by discovering new evidence.

In 1927, Heisenberg formulated a law on wave-particle duality named Heisenberg's Uncertainty. The law explains the particle phenomenon in the quantum level that cannot be proven while having the status as wave or particle. The chance for both to appear is equal because occasionally it behaves as particle and sometimes as a wave. Heisenberg formulated that in quantum cosmos a particle has momentum and position. The particle's momentums symbolised with p or E , while the position is symbolised with q or t . Both represent accurate observation. If one of the observations is zero (p or q), the other observation will become ∞ (infinite). It means when one of the observations (p or t) cannot be determined (zero), its uncertainty size becomes infinite (Fefferman & Phong 1983; Messiah 1961). However, uncertainty cannot become zero.

Someone can measure the position of a particle or its momentum but can never measure both, Hence, it is called wave-particle duality. In other words, a particle in the quantum level cannot be defined at the same time based on both its momentum and position, but it can only be defined based on one of them, either its momentum or its position only (McPhee 2010:125). The consequence of this law is clear. Nobody can find out where an atom or particle is or what exists in the quantum dimension, and discover how it moves at one time simultaneously. As particle, it can be seen as small mass, but as wave it appears as non-uniform disturbance that scatters around. Both features are different and contradictory, so it cannot be both at the same time. Davies (2020) explains this as meaningless. According to him, anyone can ask where the atom is and can obtain certain answers. Or, anyone can ask how it moves and can receive answers that make sense. However, there is no answer for the question 'where its existence is and how fast its movement is' (Davies 2020:138). Stating that an atom or particle is something (in the sense of meaning) that cannot be done if its location is unknown or does not have meaningful movement. Therefore, it can be concluded that the fundamental element of this law is uncertainty. One of them is the cut-off chain on the prime cause, the leading cause of everything that exists. The supporters of this theory hold the principle that impacts happen without a cause in the quantum world in reason.

Falsification of Karl Popper

Positivism is one of the Western thinking traditions that explains the birth process of science. In this paradigm, the truth of science has to fulfil a number of requirements, namely observable, repeatable, measurable, testable, and predictable (Mohammad 2004:79). Therefore, the truth of science can be accepted when that truth can be verified empirically. However, Karl Popper rejected that perspective. According to him, every scientific theory is hypothetical and tentative. It is open to be improved and corrected because the truth produced is temporary. In other words, science does not acknowledge the existence of final truth. Komarudin explained that Popper raised this idea because of three reasons. Firstly, general laws (such as metaphysics) and science cannot be verified. Secondly, science can be born from the perspectives of metaphysics and can be accepted in the scientific category as something meaningful after passing the testing. Thirdly, the effort to discover the meaningfulness of a theory or a scientific statement requires understanding or comprehension. It is because a theory is called theory when it can be understood and it has meaning (Komarudin 2014). For Popper, science should attempt to disprove a theory rather than support theoretical hypotheses continually. According to this view, empirical evidence should be used to test scientific hypotheses, rather than confirming them. More importantly, falsification is possible without induction, thus avoiding the sceptical problems just described and, to some extent, the issues associated with the under determination of theory by evidence. In this way, falsification is seen as an improvement over induction.

Falsification is the opposite of verification, regarding their respective approaches, not their aim. As the tentative truth, science should pass verification and falsification. If a theory is proven wrong or incorrect in the process of falsification, the theory will fail by itself. On the contrary, a theory passing falsification will make the position of the theory stronger as a general truth and accepted widely so that there will be other findings that will improve it or even refute it (Popper 2011). This effort shows that the power of a model or a theory does not lie in the empirical validation through verification, but whether the theory or the truth can be proven to pass the error test due to generalisation or its metaphysic characteristics (Popper 2008). Therefore, even though it has passed the process of falsification, a theory remains provisional. Such a characteristic is what is referred to by Popper as something dynamic and tentative from a scientific truth of knowledge.

Furthermore, Popper (2019:39) explains that if knowledge is built naturalistically, besides being considered as something that is not critical, the empirical fact found in the process of its discovery only leads to a methodological convention, which will rapidly change into a dogma. The methodological rules must be criticised, and the knowledge produced must be questioned because a piece of knowledge can be analogised as a game without an end. Those who decide that scientific statements do not require further testing because they have

been verified are like those who withdraw themselves from a game. Therefore, falsification is one of the efforts to retest scientific hypotheses. For Popper, science should be able to be retested better by discovering errors.

Philosophical reflection

Agur's confusion in understanding the phenomena of the movement of an eagle, a serpent, a ship, and a woman can be explained from the perspective of quantum philosophy. Davies quotes Bohr when stating that there is a quantum dynamics of uncertainty beneath the surface of an object or material object. This happens because the atoms making up the material truly represent intrinsic uncertainty towards nature (Davies 2020:138). The movement convention of the clock hands that have must go to the right cannot be applied at the atomic level. This is why Ghirardi and Silverman (2005) concluded that the quantum mechanical world is contradictory with intuition. Quantum cosmos describes subatomic particle behaviour, which can be considered bizarre. Wave can behave like particles; on the contrary, particles behave like waves. The particle's position can be discovered, but how fast it moves cannot be determined (Ghirardi & Silverman 2005). Such is the position of the wave. Suppose this philosophy is applied to the material as the observation object like the words of Agur. In that case, it can be seen that even though the position of each object is seen in the sky, or on a rock, or the sea, or even in the desire of human heart, how those four things move and manifest in determining their direction cannot be confirmed. Davies (2020:139) strengthened the theory when he stated that everything happens because of its reason(s) and not observed. This means that Agur only arrived at possibilities.

As the atom shows a random pattern, the direction of the four objects observed by Agur is merely chances and possibilities that cannot be determined at a particular movement. An eagle may suddenly dive sharply because it sees prey on the ground, or shift from its course due to the blowing of wind; the movement of the head of a serpent slithering can change its direction because of the surface form of the rock and rubbing its skin. The coordinate of a ship in the middle of the sea can alter several degrees due to wind or the vital flow of sea current so that the captain can make a sudden decision to change the course of the ship. Moreover, humans' decisions on passion and love depend on the combination of internal-external variables that cannot be predicted simply by looking at behaviour. As atoms in the quantum world follows the standard of wave-particle duality, the words of Agur will be limited to only normative descriptive statements on uncertainty. The choices to predict the direction possibility from the four objects, that is, whether each continues to move constantly and shows a regular or changing pattern, whether it experiences acceleration or slowing down, whether it will suddenly stay still or do a sluggish movement, become the core message of the words of Agur. In the universe, not all can always be confirmed, predicted, and become the absolute truth.

Epistemologically, on the one hand, the words of Agur can be seen as the thought faith expression on the limitation of logic, understanding, and thinking of humans in observing nature. On the other hand, the expression shows Agur's effort to construct science through the heart phenomena. However, the effort stopped at dogmatic statements due to Agur's methodology's inability to explain those phenomena. The text shows the words 'do not understand' in a narration. The Hebrew word *yāda'* (understand) means that knowledge appears after someone observes. Agur stated the contradictory statements. As reported in the text, his knowledge is limited, and his sense of mind did not experience metaphysic observation. The theologians also understand this part as one of the verses that are hard to understand. The minimum narration and the text literature form resembling narration in Preachers' holy book become another difficulty in interpreting the text. Even the same problem can be encountered in the entire Chapter 30. Are those words part of the first verse to the 33rd verse, or are they divided into parts? This still cannot be identified. If Agur only wrote the first up to sixth verses, the question is whether there is a clue on who wrote the following verses. Alden (2002), in his capacity as a professor on the OT, also admitted that the order of the verses in the Book of Proverbs Chapter 30 is uncertain.

The revealing of mystery in a text is a problem in modern hermeneutics, on the one hand, and the issue of truth verification, on the other hand. Both are wrapped in a methodological framework. The main point that emerges is the problem of meaning due to the difficulty to discern the writer's intention. Therefore, the readers need to work hard to enter the writer's mind with various types of approaches when building interpretation. The difficulty is also seen through the minimum verification towards the original manuscript (Peters 1892). Therefore, Osborne (2006:465–468) quoted Schleiermacher stating that interpretation aims to understand the writer's mind by reconstructing the text writer's original message. Lately, this technique in modern hermeneutics is called author-centred hermeneutics. Another way that can be done is to capture and reveal 'the intention' contained in a text through interpretation based on the text structure. A French philosopher, Ricoeur, first brought up this idea. According to him, life and the journey direction, as represented in the text of Proverbs 30:18–19, are dialectics between deliberate action (the object internal aspect) and non-deliberate action (perhaps due to the external element). They are also dialectic between the freedom of each observed object and necessity (Hardiman 2015:240–241). Using this approach, the interpreters entirely limit themselves to understand that animals and humans are free to determine their course. Similar to particle in the subatomic level, it is free to move to whichever direction with a random pattern. Where life moves and what ethical considerations base the decision to choose a specific direction remain unpredictable facts that are difficult to be verified.

At the beginning of his words, Agur started with the sentence that can be considered as the postulate of knowledge in a form of an amazement statement ('wonderful to me') and not understanding ('I cannot figure out' or in several translations

it is written 'I do not understand'). If the statements are seen in the framework of Popper's falsification, the tendency of the movement direction and the prediction of the future produced by the four observed objects support uncertainty. The direction becomes tentative because it can change in a second. Attempting to use the statistic method like the estimation of a straight line in a curve also becomes difficult because of the uncertainty of the variables seen by the objects empirically. Davies explains this very well through the quantum world's concept of 'probability wave'. Quoting Davies (2020:145), 'It told you where you can expect particle to be found and what chance it has from this and that characteristic, like rotation or energy'. Referring to that opinion, it can be concluded that Agur's observation phenomenon is a probability wave supporting inherent uncertainty. Falsification cannot be done in 'probability wave' that depends on free will in every living material. Moreover, the movement of those four objects cannot be defined substantively. Therefore, the effort of falsification towards uncertainty due to the presence of the free will of living beings by itself becomes a useless job. Atoms have its own free choices like living beings represented by an eagle, a serpent, a ship captain, and a woman who is in love. Falsification starts with a hypothesis and then it is tested whether the hypothesis is wrong in the generalisation of the truth. Falsifying uncertainty by searching for certainty from uncertain things is the statistic probabilities that cannot exceed the uncertainty principle itself.

Re-engagement of science and religion

The study towards the words of Agur can represent the occurrence of the unification of science and religion; how a primitive religious statement can be confirmed and is mutually in line with the theories of science. With this article, not all religious texts are metaphysic and normative. It turns out that some of the readers can be explained, verified, or even falsified. This finding settles an eternal issue that keeps happening whether science proves the truth of the Bible or just ruins its content. It has to be realised that science and religion represent two large systems of human thinking. Amid the advanced civilisation and technological accomplishment of humans, science has proven itself as a big blessing for society, with the presence of technology providing ease in a practical way of life. However, on the other hand, the same society survives living in religiosity. This was the background of Davies' (2020:13) opinion when he stated that there are two factors mutually coinciding and jointly providing dominant influence in the forming of social behaviour, and those two factors are science and religion. The issue is that both domains do not coincide at the intellectual level, and it is more towards practical things with the presence of technology. Consequently, the way society views the world experiences reorientation, from using the religious perspective at first to having the shift of using the glasses of science. Religion as the truth built is based on metaphysic things, dogma, and revelation as if facing age change products supporting scientific work methods. Both are like

being in a social arena and are mutually competitive to win a battle (Brooke 2014; Woodhead 2011). Without being realised, the way of thinking of society is formed. They tend to contradict two perspectives of the truth by making moral and ethics (Evans 2011) face with logic and ratio (Scott 2013).

The uncertainty theme brought up by the Bible is the narration that provides a new face of the relationship between science and religion. Not all from those two major systems of human thinking have to be contradictory to one another. Both also have some unification points. The areas that mutually coincide between science and religion can be seen as alternatives as to the foundation of the relationship between science and religion. Both of the thinking systems turn out to be able to integrate mutually where science can be developed with religious values and vice versa that science proves the religious truth (Suprapmanto & Prasetyo 2019). Through advanced science and technology, all the things that were considered serious errors and violations in the Bible eventually changed to become integration points and relevant things. The statements of the Bible that at first were deemed to be controversial and illogical finally obtain explanation through technology. The following are a number of examples (Morris 2015:12–15). A psalmist wrote, 'From one end of the heavens it comes forth; its course runs through to the other; nothing escapes its heat' (Psalm 19:7). The psalmist's statement seems to violate scientific facts. But in the end, it is proven that the psalmist is stating the phenomenon from the point of view of his natural observations by making himself the starting point of observation. The same goes with the shape of the earth and the width of the sky; long before science proved those two, a text in the Book of Isaiah states that:

He sits enthroned above the circle of the earth, and the inhabitants thereof are like grasshoppers; He stretches out the heavens as a canopy, and spreads them out like a tent to dwell in! (40:22)

However, people tended to consider that earth was flat during that era. A similar thing also happens with the wind cycle related to the earth rotation towards its axis; it has been explained through the Wisdom of Solomon which also confirms that the river water current always leads to the sea:

The wind blows to the south and turns to the north; round and round it goes, ever returning on its course. All streams flow into the sea, yet the sea is never full. To the place the streams come from, there they return. (Ec 1:6–7)

The list can add progressively, leading us to the conclusion that the Bible has its own ways of practices revealing the truths of the science of its time. According to Morris (2015), the Bible contains plenty of scientific correctness, which is remarkable evidence from the Divine revelation. Its content turns out to have many scientific truths that are unexpected and hidden in narrations. Yet, those just obtain recognition through the accomplishment of science and advanced science. Even though a number of the Bible narrations are not stated in the format of science and not using the modern scientific language, the writers of the Bible have shown their

understanding of nature and all its phenomena, before those are discussed and hypothesised to become the law of science by the modern scholars (Morris 2015:11). In other words, the Bible states the truth and science can take over its verification process. Therefore, both cannot mutually deny one another, but each can be independent on its own in the area of ontology and epistemology of each; or complement each other to explain.

Through uncertainty, we can explain that various phenomena of nature, despite inherently being probabilistic, turn out to have meeting points and become the arena to put science and religion on the same table. As revealed in this article, the concept of uncertainty represents the content of the Bible supporting science as an open house. On the one hand, scientists hope that science becomes something humans can rely on in explaining everything and becomes the standard of understanding in building logical truth. Predicting the weather and the presence of storms through the signs in the sky and the movement of clouds, for instance, have assisted with the city planning and the evaluation and life of the economy in anticipating disaster. The same goes with the disease diagnosis using sophisticated tools that help millions of people recover and have life expectations. However, at the same time, science is not the answer for everything. On the other hand, when physicists could not create a complete quantum theory of gravity, they tried to calculate what happens when an ordinary matter is quantised, leaving gravity alone. This meant calculating the quantum corrections due to stars and galaxies but keeping gravity untouched. By only quantising the atom, it was hoped to create a stepping-stone and gain insight into the larger goal of formulating a quantum theory of gravity (Kaku 2021:104). Although humans can design the prediction using the scientific method, not all can be predicted. Humans' future and life course are the variables that consistently fail to be guessed or falsified because of uncertainty. Two faces of science like this are always dialectic.

Engaging the truth as an encounter of science and religion in the same arena is not easy. Nevertheless, it is also not difficult to do as long as the dialogue built is not stuck at methodology contradiction, normative ontology, or the dichotomy answers of 'yes' and 'no' since those have always become the model so far. Can science legitimise the Bible narratives? Does the Bible reveal something real or made-up? Is the content of the Bible logical and scientific? Those questions have to be shifted and replaced with hard work to unite and widen the interpretation area. Therefore, a healthy and friendly dialogue will form a peaceful atmosphere and open a big opportunity for science to justify theological truth scientifically and significantly to support one another between the two mutually.

Conclusion

Uncertainty is certain. The words of Agur on uncertainty open a vast door to reflect again on two essential things that remain a mystery. Firstly, the explanation of uncertainty will only stop at the conceptual effort in describing the probabilistic possibilities. This means that everything related to life entities

truly speaks about many options. One of the things that need to be considered is the wide door on free will. Whether certainty happens because free will at the quantum level is regarded as probability wave is the exploration challenge for further research. Secondly, the presence of the Divine factor as the prime cause can be embedded to show the limitations of science and religion in explaining the phenomena of nature. This becomes the evidence of humans' limitations, on one hand, and the presence of the divine power that is unlimited, on the other hand. How the movement of Brown happens in atom and where an eagle or a serpent or a ship, or even the human desire leads to are the things that only God knows. The concept of uncertainty will eventually change the imaginary line seen in the horizon, becoming the firm limit of science accomplishment in its effort to explain the phenomena of nature. Outside of the boundary are metaphysic things. Uncertainty presents a new orientation in understanding how science and religion mutually complement each other. The traditional attitude of belief that keeps the distance towards science or suspects it as the faith killer and the obstacle in receiving metaphysic truth is obtaining proven irrelevant.

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References

- Alden, R.L., 2002, *Tafsiran Praktis Kitab Amsal [The book of Proverbs commentary]*, 1st edn., Seminar Alkitab Asia Tenggara, Malang.
- Alter, R., 2010, *The wisdom books – Job, Proverbs and Ecclesiastes: a translation with commentary*, W. W. Norton & Company, New York, NY.
- Arnold, B.T. & Beyer, B.E., 2015, *Encountering the Old Testament*, Baker Academic, Grand Rapids, MI.
- Arnold, B.T. & Williamson, H.G.M. (eds.), 2005, *Dictionary Old Testament: Historical books*, IVP Academic, Downers Grove, IL.
- Bartholomew, C.G. & O'Dowd, R.R., 2011, *Old Testament wisdom literature*, IVP Academic, Downers Grove, IL.
- Brooke, J.H., 2014, *Science and religion*, Cambridge University Press, Cambridge.
- Chan, E. & Ecklund, E.H., 2016, 'Narrating and navigating authorities: Evangelical and mainline Protestant interpretations of the Bible and science', *Journal for the Scientific Study of Religion* 55(1), 54–69. <https://doi.org/10.1111/jssr.12245>
- Davies, P., 2020, *Mencari Tuhan Dengan Fisika Baru [God and the new physics]*, 1st edn., ed. M.A. Elwa, Nuansa Cendekia, Bandung.
- Estes, D.J., 2005, *Handbook on the wisdom books and Psalms*, Baker Books, Grand Rapids, MI.
- Evans, J.H., 2011, 'Epistemological and moral conflict between religion and science', *Journal for the Scientific Study of Religion* 50(4), 707–727. <https://doi.org/10.1111/j.1468-5906.2011.01603.x>
- Fefferman, C.L. & Phong, D.H., 1983, 'The uncertainty principle', *Bulletin of the American Mathematical Society* 9(2), 129–206. <https://doi.org/10.1002/cpa.3160340302>
- George, A. (ed.), 2017, *The quantum world – The disturbing theory of the heart of reality*, New Scientist, London.
- Ghirardi, G. & Silverman, M.P., 2005, 'Sneaking a look at God's cards: Unraveling the mysteries of quantum mechanics (translation)', *American Journal of Physics* 73(7), 670–671. <https://doi.org/10.1119/1.1904624>
- Giebel, G., Badger, J., Landberg, L., Nielsen, H.A., Nielsen, T.S., Madsen, H. et al., 2007, 'Ensemble predictions: Understanding uncertainties', in *European wind energy conference and exhibition 2007 (EWEC 2007)*, vol. 2, pp. 838–849, American WindPower, Los Angeles, CA.
- Halkjelsvik, T. & Jørgensen, M., 2018, 'Predictions and the uncertainty of the future', in *Time predictions*, pp. 13–33, Springer International Publishing, Cham.
- Harahap, R., Hasibuan, A.T., Sirait, S., Yuliawati, F. & Lubis, N., 2019, 'Teori Falsifikasi Karl Raimund Popper Dan Kontribusinya Dalam Pembelajaran IPA Bagi Siswa Usia Dasar', *MAGISTRA: Media Pengembangan Ilmu Pendidikan Dasar Dan Keislaman* 10(2), 166–184. <https://doi.org/10.31942/mgs.v10i2.3106>
- Hardiman, F.B., 2015, *Seni Memahami [The art of understanding]*, Kanisius, Yogyakarta.
- Harrison, P., 2006, 'The Bible and the emergence of modern science', *Science & Christian Belief* 18(2), 115–132.
- Hart, M.H., 2018, 'Werner Heisenberg', in *100 Tokoh Paling Berpengaruh Sepanjang Sejarah [100 of the most influential figures in history]*, IRCiSoD, Yogyakarta.
- IBM, 2011, 'IBM SPSS regression 22', *IBM*, pp. 1–42, viewed 29 December 2021, https://www.sussex.ac.uk/its/pdfs/SPSS_Regression_22.pdf.
- Kaku, M., 2021, *The God equation: The quest for a theory of everything*, Doubleday, New York, NY.
- Komarudin, 2014, 'Falsifikasi Karl Popper Dan Kemungkinan Penerapannya Dalam Keilmuan Islam', *Jurnal At-Taqaddum* 6(2), 444–465.
- Mandel, D., 2005, *Who's who in the Bible*, Bidge-Logos, Alachua, FL.
- McPhee, I., 2010, *Armchair physics*, Quarto Publishing, New York, NY.
- Messiah, A., 1961, *Quantum mechanics*, vol. 1 & 2, Oliver & Boyd, Edinburgh.
- Mohammad, M., 2004, *Filsafat Ilmu: Kajian Atas Asumsi Dasar, Paradigma Dan Kerangka Teori Ilmu Pengetahuan*, Belukar, Yogyakarta.
- Morris, H.M., 2015, *Sains Dan Alkitab [Science and the Bible]*, rev. edn., ed. S. Tumakaka, Gandum Mas, Malang.
- Osborne, G.R., 2006, *The hermeneutical spiral*, 2nd edn., IVP Academic, Downers Grove, IL.
- Peters, J.P., 1892, 'Notes on some difficult passages in the Old Testament', *Journal of Biblical Literature* 11(1), 38. <https://doi.org/10.2307/3259077>
- Popper, K., 2008, *The logic of scientific discovery (Logika Penemuan Ilmiah)*, Pustaka Pelajar, Yogyakarta.
- Popper, K., 2011, *Karl Popper – Logika Penemuan Ilmiah*, ed. A.F. Sompotan, H. Nugroho, Muliadi, E. Surmaini, A. Ramdhani & A. Kristianto, Perpustakaan Sains Kebumian ITB, Bandung.
- Popper, K.R., 2019, *Logika Penemuan Ilmiah*, 2nd edn., ed. M. Mustafied, Pustaka Pelajar, Yogyakarta.
- Scott, M.W., 2013, 'The anthropology of ontology (religious science?)', *Journal of the Royal Anthropological Institute* 19(4), 859–872. <https://doi.org/10.1111/1467-9655.12067>
- Seth, S., 2017, 'Quantum physics', in J.Z. Buchwald & R. Fox (eds.), *The Oxford handbook of the history of physics*, pp. 814–859, Oxford University Press, Oxford.
- Suprapmanto, J. & Prasetyo, Z.K., 2019, 'Sains-religion: Analysis of learning needs based on religious values in science learning', *Journal of Physics: Conference Series* 1233(1), 012080. <https://doi.org/10.1088/1742-6596/1233/1/012080>
- Walton, J.H., Matthews, V.H. & Chavalas, M.C., 2000, *The IVP Bible background commentary – Old Testament*, IVP Academic, Downers Grove, IL.
- Woodhead, L., 2011, 'Five concepts of religion', *International Review of Sociology* 21(1), 121–143. <https://doi.org/10.1080/03906701.2011.544192>