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RECONSTRUCTION OF THE DIGITAL ECONOMY ALGORITHM FROM *KHITAB WAD'I* TO *KHITAB TAKLIF*: A PERSPECTIVE FROM JASSER AUDA'S SYSTEM THEORY

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ABSTRACT

This article examines the reconstruction of digital economic algorithms from the category of *khitab wad'i* to *khitab taklif* through the perspective of Jasser Auda's systems theory. The rapid expansion of digital transactions has transformed algorithms from merely technical instruments into automated decision-making systems that influence contracts, pricing, recommendations, credit scoring, and user access to economic services. This development raises a fundamental question in Islamic economic law: whether algorithms should remain understood as passive legal means or be positioned as functional extensions of human action. This study employs normative legal research with conceptual, philosophical, and maqasidi approaches. The data are derived from classical *usul fiqh* literature, Jasser Auda's systems theory, and contemporary studies on algorithmic governance in the digital economy. The findings show that classical *usul fiqh* tends to position algorithms as *wasilah* or *sabab*, while systems theory enables a more holistic reading by connecting human intention, technological design, automated action, legal consequence, and maqasid. This article argues that algorithms in the digital economy may be reconstructed as part of *fi'l al-mukallaf* because their operation reflects human intention, design, and responsibility. This reconstruction contributes to the development of Islamic digital economic law by strengthening legal accountability, ethical responsibility, and maqasid-based governance in automated transactions.

Keywords: *algorithmic agency; digital economy; khitab taklif; khitab wad'i; Jasser Auda; systems theory*

ABSTRAK

Artikel ini mengkaji rekonstruksi algoritma ekonomi digital dari kategori *khitab wad'i* menuju *khitab taklif* melalui perspektif teori sistem Jasser Auda. Perkembangan transaksi digital telah mengubah posisi algoritma dari sekadar instrumen teknologis menjadi sistem pengambil keputusan otomatis yang memengaruhi akad, harga, rekomendasi produk, penilaian kredit, dan akses pengguna terhadap layanan ekonomi. Perubahan ini menimbulkan persoalan mendasar dalam hukum ekonomi Islam, yaitu apakah algoritma tetap dipahami sebagai sarana hukum yang pasif atau perlu diposisikan sebagai perpanjangan fungsional dari tindakan manusia. Penelitian ini menggunakan metode hukum normatif dengan pendekatan konseptual, filosofis, dan maqasidi. Data penelitian bersumber dari literatur *usul fiqh* klasik, teori sistem Jasser Auda, dan kajian kontemporer tentang tata kelola algoritmik dalam ekonomi digital. Hasil penelitian menunjukkan bahwa *usul fiqh* klasik cenderung menempatkan algoritma sebagai *wasilah* atau *sabab*, sedangkan teori sistem memungkinkan pembacaan yang lebih holistik dengan menghubungkan niat manusia, desain teknologi, tindakan otomatis, konsekuensi hukum, dan tujuan syariah. Artikel ini berargumen bahwa algoritma ekonomi digital dapat direkonstruksi sebagai bagian dari *fi'l al-mukallaf* karena operasinya merepresentasikan kehendak, desain, dan tanggung jawab manusia. Rekonstruksi ini berkontribusi pada pengembangan fikih ekonomi digital dengan memperkuat akuntabilitas hukum, tanggung jawab etis, dan tata kelola transaksi otomatis berbasis maqasid.

Kata kunci: *agensi algoritmik; ekonomi digital; khitab taklif; khitab wad'i; Jasser Auda; teori sistem*

INTRODUCTION

The development of digital technology has transformed the way humans conduct economic transactions. In the past, humans interacted and transacted with other humans, but now humans transact with algorithms. This is because the role and function of humans have been replaced by algorithms. Algorithms operate not merely as technical tools but as representations of diverse human intentions, thereby supplanting the role and function of humans.

These intentions are then manifested in the form of data logic and digital commands. In this context, algorithm's function much like human actions themselves. Within the framework of Islamic law, this situation presents new challenges. The issue pertains to the status of the algorithm itself. Algorithms are positioned not merely as technological instruments that can be classified as *khitab wad'i*, but as the actions of a *mukallaf* and fall under the category of *khitab taklif*.

In Islamic legal discourse, the *khitab taklif* is the command of Allah SWT that is directly related to human actions (Al-Minawi, 2011). In the current context of the digital economy, the manifestation of human actions is the algorithm. When a legally accountable person creates, configures, or uses an algorithmic system to make decisions or carry out specific actions, the algorithm substantively represents the will and intent of that person. This phenomenon presents a new challenge for the epistemology of Islamic law regarding algorithms as manifestations of human actions.

This problem serves as a strong indication that algorithms cannot be positioned merely as technological instruments, as they operate within the realm of actions with legal implications. Algorithms execute decisions that produce normative consequences, necessitating their examination through a more adaptive and systemic framework of usul fiqh. Algorithms perform actions that have an impact on users, so their status approaches that of *af'āl al-mukallaf*. In fact, algorithms sometimes perform actions that cannot be directly attributed to human intent because they operate through autonomous internal logic. This situation requires the identification of the appropriate '*illat* so that algorithms can be positioned as *khitab taklif* (legal obligations) in Islamic legal analysis.

The current research landscape on Islam and algorithms is concentrated in three main areas. First, the discourse on digital ethics, which seeks to identify common ground between Islamic values and AI development, as explored by (Elmahjub, 2023). Second, approaches to cyberlaw and positive regulation that examine technology from an administrative-legalistic

perspective (Kurniawan, 2022). Third, philosophical debates regarding the morality of artificial agents in general from a global perspective (Floridi & Sanders, 2021). Although these studies provide a valuable foundation, there remains one fundamental aspect that has not been addressed: how to directly situate autonomous algorithmic actions within the structure of *khitab taklif*. Existing literature tends to confine algorithms to the domain of ethics or supporting instruments (*wasīlah*). Consequently, a theoretical gap arises when algorithms perform actions that substantively resemble the acts of the legally accountable individual (*af'āl al-mukallaf*). This is where this article takes a different stance, namely by conducting an epistemological reconstruction so that algorithms are no longer viewed as passive legal objects, but rather as legal subjects with legal consequences."

Therefore, using an usul fiqh and systems theory approach, algorithms are treated as a concrete manifestation of the actions of a *mukallaf* (*khitab taklif*). With this concept, algorithms can be easily analyzed from a legal perspective. Furthermore, this concept allows for a broader epistemological analysis of Islamic law in addressing the contemporary digital world. Furthermore, this new concept can provide a new foundation for understanding *khitab taklif* because algorithms are inherently part of human actions. Thus, this research not only affirms the relationship between humans and technology but also positions algorithms as a new dimension of *fi'l al-mukallaf* that carries legal relevance and legal responsibility within Islamic law.

Based on this perspective, the reconstruction proposed in this article does not mean that algorithms are treated as independent moral subject's equivalent to humans. Algorithms do not possess reason, consciousness, or spiritual accountability in the same way as a *mukallaf*. Rather, they are understood as functional manifestations of human action because they are created, configured, activated, and utilized by legally accountable persons. Their autonomy is therefore not ontological autonomy, but functional autonomy derived from human design and purpose. For this reason, algorithmic action can be normatively attributed to the human actors who develop, control, benefit from, or deploy it in the digital economy.

The novelty of this article lies in its attempt to reconstruct the status of algorithms from *khitab wad'i* to *khitab taklif* by integrating classical *usul fiqh* and Jasser Auda's systems theory. This reconstruction contributes to Islamic economic law in at least three ways. First, it expands the scope of *fi'l al-mukallaf* in the digital era by including algorithmic action as an extension of human conduct. Second, it provides a stronger basis for legal accountability in automated transactions, especially when algorithms produce harm, injustice, manipulation,

or uncertainty. Third, it develops a maqasidi-systemic model of digital economic fiqh that is more responsive to technological complexity while remaining rooted in the objectives of Sharia.

Accordingly, this study seeks to answer the following question: how can digital economic algorithms be reconstructed from the category of *khitab wad'i* into the sphere of *khitab taklif* through the perspective of Jasser Auda's systems theory? By answering this question, the article aims to build a conceptual foundation for understanding algorithmic agency within Islamic legal reasoning. This study is expected to contribute to the development of contemporary Islamic economic law, particularly in formulating legal responsibility, justice, transparency, and maqasid-based governance in automated digital transactions.

RESEARCH METHOD

This literature review employs a normative legal research method with a conceptual and philosophical approach (Wiraguna, 2024). This method aims to reconstruct the position of algorithms in the digital economy through the perspectives of usul fiqh and systems theory. The primary data sources for this study include classical usul fiqh texts discussing *khitāb al-taklīf*, *wasīlah*, *sabab*, and *fi'l al-mukallaf*, as well as works by Jasser Auda on systems theory. Secondary data is obtained from academic journals and books discussing algorithmic authority and the digital economy. All data is collected through *library research* and analyzed qualitatively by integrating the approaches *of qiyās*, usul fiqh reasoning, systems theory, and the study *of maqāṣid al-sharī'ah*.

The methodological framework of this research consists of four stages. First, the researcher identifies classical concepts in usul fiqh relevant to algorithmic issues, particularly *khitāb*, *wasīlah*, and *sabab*, to map how classical Islamic law understands the relationship between the actions of the *mukallaf*, means, and legal causes. Second, the researcher conducts a textual analysis using the *qiyās* and *usul fiqh reasoning* approaches to these concepts to assess whether algorithms are more appropriately positioned as *wasīlah*, *sabab*, or possess characteristics that transcend both. Third, the results of this textual analysis are integrated with Jasser Auda's systems theory framework to examine algorithms as part of a digital system that has functional interconnections with human intent, purpose, and action. Fourth, this study formulates a new epistemological construction by positioning algorithms as part of *fi'l al-mukallaf*, so that algorithms are no longer understood merely as technical instruments, but rather as actions that give rise to *taklīf* consequences in Islamic law.

FINDINGS AND DISCUSSION

Algorithms as *Wasīlah* and *Sabab* in the Perspective of Classical Fiqh

From the perspective of classical usul fiqh, discussions regarding algorithms fall within the framework of the discourse *on wasilah*. However, the *wasilah* referred to in the discourse of usul fiqh is action (*af'al*). This is because what is addressed by *the sharia* is action (al-Zuhaili, 2006). For example, waging war or jihad in the path of Allah SWT. Waging war is a human action (*fi'l mukallaf*). Its position is as *a means (wasilah)*, while its purpose is to uphold the religion of Allah SWT.

Even if *the means* involves an object, what the *ushuly scholars* discuss is the action of *the mukallaf* when using that object. For example, water is used as *a means* for the purpose *of purification (thaharah)*. The *ushuly* scholars discuss the action of the *mukallaf* when using water. They do not discuss the water itself. This is because the law is not directly related to the object, but rather to the action.

Theoretically, an algorithm functions as an intermediary (tool) to achieve a specific outcome. It is integral to a process designed to fulfill a specific objective. In this context, the algorithm serves to bridge the interests of the seller and the buyer. Thus, the sale and purchase contract can be executed.

For example, *the offer (ijab)* and *acceptance (qabul) via* a letter. Through *the medium* of a letter, the declaration of offer and acceptance can be achieved. According to Abu Hamid al-Marwazi, this was explained by Imam Shafi'i. The same opinion was expressed by Hujjatul Islam Imam Ghazali and Sheikh Zakaria Anshari.

He stated that if a person writes a letter to someone not present at the place of the contract for the purpose of a sale or other matters, the contract is valid. As for the buyer's *acceptance* of the contract, it is valid once the letter has reached their hands and they are aware of its contents. From that point, the right *of khiyar* also applies as long as the buyer remains in the place where they received the letter. If the buyer's right of *khiyar* expires, the seller's right of *khiyar* also expires (al-Nawawī, 1344).

The scholars then provided arguments regarding this validity. According to them, the validity of transactions using letters stems from their equivalence to direct speech. They said, *"al-kitab kal khitab"*—the letter is like direct speech. Therefore, whatever is written is considered to have been spoken by the seller and the buyer (Muḥammad, n.d.).

A similar concept can also be found in algorithms. Currently, the function of letters has begun to be replaced by *algorithms*. Algorithms function much like correspondence. They

serve as a bridge for the communication *of ijab-qabul,* and in fact, algorithms function beyond that.

Furthermore, both letters and algorithms facilitate the creation of legally binding actions. Through *the medium* of a letter or an algorithm, *an offer* and *acceptance* take place. In this context, *the offer and acceptance* constitute the *legal* cause that gives rise to a legal ruling. Through *this exchange*, a transfer of ownership occurs—which, by definition, is the objective of a sale.

Apart from being *a means*, from another perspective, an algorithm can also be classified as *a* legal *cause*. This may occur if an algorithm is equated with the actions of a pet. Both possess volition. The legal consequences of the good or bad actions performed by a pet are attributed to its owner. The same applies to an algorithm.

Terminologically, *a "sabab"* is something whose existence gives rise to legal consequences, and if it does not exist, there are no legal consequences (al-Subkī & al-Subkī, 1424). It falls under one of the categories of "hukum *wad'i*." As a "hukum *wad'i*," *the "sabab"* is not directly related to *divine revelation (khitab)* as are the actions of a legally accountable person (*mukallaf*). However, due to its existence, the *legally accountable* person bears the burden of legal obligation.

For example, if a person's pet successfully catches game, the owner is permitted (*mubah*) to consume the game (Qudāmah, 1388). Conversely, if the pet damages another person's property, the owner is obligated to compensate for the damage (*dhaman*). From this, it is evident that *due to* the actions of the pet, the responsibility is attributed to the owner (al-Iftā, 1439).

A similar situation can be found in algorithms. Algorithms are not much different from the actions of the animal mentioned above. *Due to* the actions of the algorithm, legal consequences arise that are attributed to its user. This also shows that *the legal text* does not directly pertain to algorithms. However, due *to* the actions of the algorithm, the legally *accountable* person bears the legal burden *of obligation.*

Currently, contemporary scholars have also incorporated algorithms as a crucial topic in contemporary economic studies. They recognize that digital technology is inseparable from human life. They realize that nearly all human activities depend on digital devices. They also understand that due to the internet and its algorithms, transactions have become more effective and efficient.

The scholars then discussed the legal rulings on transactions using digital devices such as algorithms. Their focus was on the status of the algorithm itself. More precisely, they discussed the status of the internet and its algorithms as *a means* that can be trusted or not. According to them, it is permissible and valid to conduct transactions via the internet as long as they do not involve deception, uncertainty, or similar issues.

This discussion was previously presented by *"Dar al-Ifta' al-Misriyyah*." Specifically in Fatwa No. 217, dated December 13, 2005. In this context, Sheikh Ali Jum'ah Muhammad was asked about the legal ruling on using the internet as an intermediary for buying and selling. In short, he replied:

فإن استخدام الإنترنت شبكة المعلومات الدولية للدلالة على السلع وتيسير عقد الصفقات مع انتفاء التغرير والجهالة والغش والاستغلال جائز شرعًا

…*Using the internet (an international information network) for promoting goods and* facilitating *various transactions is permissible as long as there are no elements of gharar, fraud, ignorance, or exploitation.*

Beyond the issue of algorithmic reliability, contemporary scholars also address the *mu'athah* contract arising from such systems. This is because digital platforms facilitate transactions without *explicit offer and acceptance (ijab-qabul)*. Meanwhile, some scholars require that buying and selling be conducted through the verbal exchange *of offer and acceptance*. Thus, according to some scholars, transactions conducted via algorithms are invalid if they fall under the category of a *mu'athah* contract.

However, contemporary scholars offer the option of changing schools of thought. This is because scholars differ in their opinions regarding the validity of the *mu'athah* contract. In this regard, the Shafi'i school is quite strict, so they prohibit the practice of the *mu'athah* contract. As for the majority of scholars, they hold the opposite view. In their view, the *mu'athah* contract is valid because the most essential aspect of a transaction is mutual consent. If both parties entering into the contract are mutually satisfied with what they are transacting, then *the exchange of consent (ijab-qabul)* is no longer required. In fact, in today's digital context, a *mu'athah* contract in written form holds a stronger legal standing. It serves as written evidence of the transaction's occurrence.

Limitations of Text-Centric Reasoning

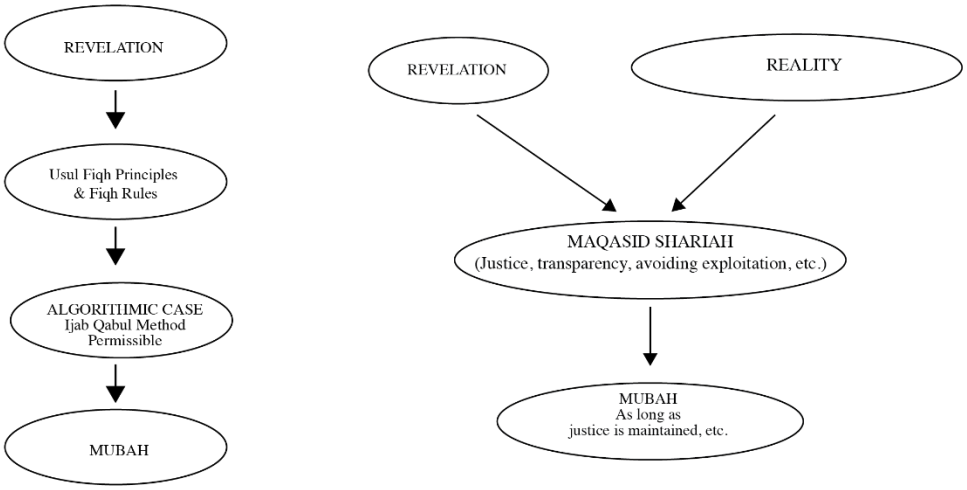
Referring to the discussion above, algorithms are assumed to be a sufficiently credible means for performing *the ijab-qabul* in a sales contract. The answer is analyzed using a classical usul fiqh approach. More precisely, through the methods of ijtihad *bayani* and *qiyasi*. The use

of these two methods of ijtihad indicates that the study is dominated by textual analysis. Such studies are highly characteristic of classical usul fiqh scholarship. This also reveals that the perspective of the study is legal-formal in nature. That is, the analysis remains formal and linear.

It is called linear because the method of analysis is vertical or one-directional. Whatever the legal issue may be, everything must refer to the texts of the shar'i evidences. It is those texts that eventually give rise to the *usul* principles. If a new case arises, that case will be examined for its conformity with those *usul* principles. Only then is the ruling derived.

If the model is one-directional, there is naturally no room to analyze the complexity of the algorithm. The analysis is dominated solely by the alignment of the algorithmic problem with the text. Consequently, there is no *feedback* process between reality and the text. A linear analysis model like this merely treats social facts or algorithmic facts as case study samples, not as epistemic elements that contribute to the formulation of a legal ruling. Even if classical usul fiqh accommodates the complexity of algorithmic reality, its approach remains text-centric. Algorithmic complexity is considered only if it *explicitly* aligns with the text or *the maqasid syar'iyah*. Other arguments serve merely as supplements. This indicates that reality is not positioned on equal footing with the text, but its position is always subordinate, as shown in Figure 1 below.

Figure 1: Differences in Perspective
Classical Usul fiqh and Systems Theory



Even if social realities such as tradition, *public interest*, or *istihsan* are recognized as sources of law, their hierarchical level remains subordinate to the texts of the Qur'an and

Sunnah. The proof is that these sources must not contradict the unambiguous meaning of the text (*qatí dalalah*). This perspective renders algorithmic realities devoid of epistemic authority. It is understandable that classical usul fiqh studies have not yet been able to incorporate it into systemic and epistemological studies. This is because their analysis stops at the formal level of the text.

The Character of Algorithms as Active Actors

Therefore, to understand the epistemological and systemic dimensions of algorithms, a more open approach is needed, such as Jasser Auda's systems theory. In this regard, Jasser Auda offers a systems approach. The approach he proposes is adapted from the systems theory developed by Ludwig von Bertalanffy. According to this theory, Islamic law is a legal system composed of various elements. Each element interacts with the others, making the system appear comprehensive and complex (Rosidin & El-Muním, 2008).

The elements in question are the cognitive element, the purpose element, the openness element, the interrelatedness element, the multidimensional element, and the holistic element. According to systems theory, these six elements operate systemically, so that the resulting legal products are not simply black-and-white or halal-haram. However, this continues with a systemic design that aligns with the context of the digital economy and is consistent with *the maqasid syar'iyah* (Audah, 2012).

The systemic operation of these six elements involves positioning the digital reality in partnership with the revelatory texts of the Quran and hadith (see Figure 1.1). Thus, the legal construction is not linear, as is the case with classical fiqh and usul fiqh. Since the digital reality is partnered with the revelatory texts, the two engage in dialogue. Consequently, the revealed texts utilize reality as a source of information for establishing a legal ruling.

However, it must be emphasized that Jasser Audah's perspective does not automatically negate the sacredness of the revealed texts. Reality and revelation cannot be ontologically equivalent. The truth of the Quran and hadith is absolute, whereas reality is not. What needs to be changed, however, is the perspective on the relationship between revelation and reality.

That is to say, revelation remains the primary source of law. Its position is irreplaceable by anything, including digital reality, because revelation is normative-transcendent. However, digital reality is introduced so that it can provide interpretations and

information regarding Revelation. This is highly realistic because the nature of digital reality is contextual-empirical. Thus, the position of digital reality is not subordinate.

This perspective creates greater room for ijtihad. The ijtihad carried out by mujtahids does not stop at an understanding of text-based *usuliyah* principles, but they must understand algorithmic reality in greater detail. This is important because algorithmic reality becomes an element on par with revelation when producing law. In this context, a dialogue occurs between the text of revelation and algorithmic reality.

The realization of this perspective can be seen in the difference between classical usul fiqh reasoning and systems theory reasoning when addressing the legality of human transactions involving algorithms. When using classical fiqh and usul fiqh reasoning, the issue stops at the validity of conducting the transaction. The discussion focuses on the credibility of the algorithm as *a means* or *cause* for entering into a contract. This means the algorithm is positioned passively, much like conducting a transaction via a letter.

In reality, an algorithm is more than that. It can perform actions akin to those of *a mukallaf*—an individual subject to *legal obligations*. This is why many human roles and functions have been replaced by algorithms. Whereas in pre-modern times humans transacted with other humans, today humans transact with algorithms. Yet, a fundamental requirement of a sale is that both the seller and buyer must be *mukallaf*.

DISCUSSION

Integration with Jasser Auda's Systems Theory

Therefore, systems theory views algorithms from a more comprehensive (*holistic*) perspective. Systems theory views algorithms not merely as a means or instrument *of offer and acceptance*, but as an active entity that processes input into output (Gomes, 2022), a connector between subsystems (Rilinger, 2024), a control mechanism and feedback loop, and operational rules.

As a connector between subsystems within a digital economic system, algorithms collect data, process data, and transmit data from one subsystem to another (Azevedo, 2023). In addition to acting as a connector, algorithms also function as regulators of interactions and controls between subsystems (Hanspach, 2024). Algorithms regulate responses between subsystems based on incoming data conditions. In this regard, algorithms serve as the executors of decisions. At other times, the algorithm functions as an operational rule (Yeung,

2018). It dictates what actions must be taken, when they should be performed, and how they should be carried out (Palop, 2020).

The algorithm carries out these positions, roles, and functions independently, so that humans simply receive the results. For example, transactions via digital devices can create a sufficiently strong level of security. The Sharia objective of safeguarding assets can be more easily achieved through them. Their legal standing is stronger because every transaction has supporting evidence. Every transaction is recorded in chat history or email. There is also evidence of transfers and *invoices*.

According to this view, the most essential aspect of a transaction is the mutual consent reached by both parties. Moreover, this is explicitly mentioned in the hadith. As for the requirement to perform *ijab-qabul*, it is merely a product of the ijtihad of past scholars as a means of inferring (*madzinnah)* mutual consent (ar-Ramlī, 1430). A characteristic of the results of ijtihad is that they are temporal and localized.

Another positive aspect is that algorithms can operate more selectively. This is important for reducing the level of uncertainty in a transaction. The way classical Islamic jurisprudence assesses a person's eligibility for a loan is still very manual. Naturally, its accuracy remains questionable, leading to highly detrimental uncertainty (*gharar fahisy)*.

As for how algorithms work, they can be more effective. For example, credit score algorithms use data recorded in digital devices (Óskarsdóttir et al., 2019). Digital footprints are used as a reference to measure a person's credit score. These digital footprints include spending history, income records, credit installment history, and others (Xu, 2025).

In this context, the systems theory maintains that the revealed text prohibits *gharar*. The evidence regarding this prohibition *is definitive* and abundant. However, the perspective on the prohibition *of gharar* is viewed more holistically (*syumuliah*). From this, the understanding emerges that the *gharar* that is prohibited is extreme uncertainty (*gharar fahisy*). As for algorithms, their presence actually reduces *gharar* because their accuracy is higher (Ali, 2025).

However, on the other hand, it must be recognized that algorithms are human creations. Naturally, they are not immune to *human error*. Behind the acceleration, convenience, and efficiency they offer, algorithms may also give rise to detrimental outcomes (Usman, 2022). Meanwhile, the direction of Islamic law cannot be separated from *maslahat* (benefit) and *mafsadat* (harm).

In practice, algorithms operate strictly according to the formulas created by their programmers. Therefore, they are not neutral (Stinson, 2022). They are designed to achieve a specific objective. Their output may generate benefits, such as filtering pornographic content, distributing zakat, and so on. Alternatively, their output may cause harm, such as price manipulation, gambling advertisements, and so on.

Reconstructing Algorithms as *Khitāb al-Taklīf*

Using a classical usul fiqh approach, whatever an algorithm causes should be the responsibility of its user. If the algorithm is *the cause* of harm, then the user must compensate for it. This is analogous to livestock damaging someone's property. Naturally, the livestock owner must compensate for the damage. Legal liability is imposed on the livestock owner, and the same applies to algorithms.

However, in certain situations, the algorithm user may evade responsibility. They might argue that the resulting loss occurred beyond their control. Everything runs automatically (Hutapea et al., 2025). For example, suppose an algorithm suddenly wipes out the account balance of an *e-wallet* user when they open the app. If the algorithm is likened to livestock, then compensation for damage caused by the livestock is not absolutely imposed on the owner. There are situations and conditions where the owner is not liable for the losses caused by their livestock (al-Ḥanbalī, 1415).

This situation is highly likely to occur, especially since classical fiqh only classifies algorithms as *a cause* or *means*. This means that *the means* or algorithm is distinct from human action (see Figure 1.2). Although the *means* is influenced by the intent and actions of a legally accountable person, it is still not the person's own action. That is why *a* legal *cause* does not automatically give rise to *a legal obligation*. This is analogous to the comparison of an algorithm with livestock.

Figure 2: The Old Paradigm
the relationship between humans and algorithms

This situation triggers the need for a methodological renewal. At the very least, specifically in the study of the digital economy, the scope of the sharia address is expanded. It does not stop at the actions *of the mukallaf* but also extends to algorithms. This means that

algorithms *are* directly *included* in *the actions of the mukallaf*. Algorithms no longer need to be categorized *as causes* or *means* because they are *inherently* included in *the actions of the mukallaf* that are directly related to Allah SWT's *address*.

Thus, the legal definition does not stop at Allah SWT's address, which relates only to the actions of *accountable* individuals, but extends to the algorithms. The full text reads:

خطاب الله المتعلق بفعل المكلف و خوارزميته إقتضاء أو تخييرا او وضعا

The Word of Allah SWT pertaining to the actions of the mukallaf and its algorithm*, whether by necessity, choice, or prescription.*

This legal definition has a broader scope than the legal definition in classical usul fiqh. Algorithms, with all their unique characteristics, *are* directly *classified* as *taklif* laws, not *wad'i* laws. However, this definition does not intend to link the khitab to algorithms independently, as the khitab pertains to the actions of the *mukallaf*. Nevertheless, algorithms are considered *inherent* to the *mukallaf*.

In the digital economy, the actions of algorithms are bound to and cannot be separated from the *mukallaf*. Although it is not physically attached to the *mukallaf* like hands and feet, functionally it constitutes human action in the digital space. The analogy of algorithms to human actions is akin to the mind and the hand. The mind provides direction and will; the hands carry it out. If the hands make a mistake, the mind bears the consequences. The same applies to algorithms. Every action in the digital space is attributed to the intent and moral responsibility of *the accountable individual* who creates, configures, and uses it.

Figure 3: A New Paradigm
Algorithms as a Call to Duty

Epistemological Implications

This concept makes legal responsibility clearer. Its position is no longer merely as *a cause* or *means*, leaving no room to evade the burden of responsibility. The algorithm's actions are the actions of the *mukallaf* themselves. Since its position is *inherent* in *the mukallaf's* actions, all direct legal consequences are borne by the individual.

This idea is likely to face objections regarding the boundary of autonomy between the legal subject (*mukallaf*) and the technical instrument. The main objection usually rests on the principle that *taklīf* is directed only at those of sound mind (*'āqil*). However, through a critical examination of Systems Theory, it is found that algorithmic autonomy does not stand alone ontologically, but rather constitutes 'functional autonomy' derived from the intent and design of *the mukallaf*. Therefore, system failure or digital *force majeure* does not automatically negate legal liability; rather, it requires proof of negligence (*tafthīr*) in the design or use of the system.

The proposed expansion of the definition above makes the process *of* legal *deduction* more practical and efficient. Its position is clear and straightforward. Islamic legal scholars no longer need to waste energy debating whether an algorithm is *a cause* (*sabab*) or *a means (wasilah)*. This proposed definition ends that debate.

This legal expansion will also make fiqh proposals more relevant to the context of the digital economy. The old definition was constructed based on the realities of past contexts. It assumed that humans always act directly, whereas such actions are no longer found in the current reality of the digital economy.

Almost all digital economic transactions are conducted directly through algorithms. Examples include *auto-debit*, *smart contracts*, and others. This means that the proposed expansion of the definition directly addresses the reality of the digital economy. This is the manifestation of the cognitive and open-ended nature of Jasser Audah's systems theory.

If this proposal to expand the definition is rejected, it will lead to a simplification of algorithmic reality. Islamic legal studies will appear to reduce the complexity of the digital economic reality. The holistic nature of Islamic studies will be lost. The results of the study will be limited to normative aspects alone.

Another argument is that this expanded definition necessitates analogizing the position of algorithms to human actions, not to legal *means (wasilah)* such as letters or legal *causes (sabab)* like *the actions* of animals. It is acceptable to analogize algorithms to letters as *legal means* or to the actions of animals as *legal causes* because there is a similarity in *the underlying rationale (illat)*. However, it must not be overlooked that algorithms can also be analogized to the actions of a *legally accountable* person (*mukallaf)*.

In classical usul fiqh terminology, this is known as *qiyas syibh*. *Qiyas syibh* is a situation where *a branch (far'un)* can be analogized to two *roots (ashal)* with differing legal rulings (al-Minīyāwī, 1432). Take the example of a slave. From the perspective that a slave is a human

being, he can be analogized to a free person, so that he is entitled to the right of ownership. However, if viewed from the perspective that a slave is an object or a thing, then he can own something (al-Hindī, 1416).

The determination that the status of a slave is analogized to one of two *ashl* must consider which aspect is more dominant. If the slave is predominantly likened to property, then he cannot own anything. However, if he is predominantly likened to a human being, then he can own things just like a free person (*al-hur*). Regarding which is more dominant, the scholars differ in opinion.

The same line of reasoning can be applied to discuss the status of algorithms. If following the logic *of qiyas al-syibh*, an algorithm can be analogized to a letter since both are tools or *means*. It can also be likened to livestock since both serve as *causes*. In this case, although there are similarities between algorithms, letters, and livestock, the distinguishing aspects are numerous.

This case is analogous to the theft of a shroud from a grave. Some scholars reject the ruling of amputation even though the theft of a shroud is similar to other forms of theft. Both involve stealing from a place of storage. However, some scholars reject the similarity between these two cases because the theft of a shroud has distinguishing factors (az-Zubaidi, 1435).

The same logic can also be applied to algorithms. An algorithm is not merely *a means* or *a* common *cause*. Although there are similarities, the differences are far greater. It possesses greater causal power than *a cause* or *means* because it can actively move on its own. Algorithms actively intervene in actions and influence others' decisions. They function much like humans. Algorithms can learn and develop on their own (*machine learning*).

With its intelligence, it can influence human desires through recommendations, reminders, content filters, and so on. It operates much like a salesperson standing amidst a crowd, readily offering goods to others. An algorithm not only actively facilitates transactions but also shapes consciousness.

The rationale for including algorithms within *the scope of legal obligations* lies in their ability to produce decisions that directly impact human rights and obligations. Algorithms operate autonomously to select, classify, and execute commands that subsequently have direct legal consequences within the digital ecosystem. This can be explained through Jasser Auda's framework, which emphasizes the interconnection between intent, function, and consequence. Algorithms function as *causality-driven* decision structures, such that every

instruction within them generates *actions* with legal implications for users. Algorithms also possess *openness* and *multi-dimensionality*, which means their actions are no longer merely technical representations but function as triggers of legal causation in various digital contexts. Algorithms also generate *actions* that trigger normative consequences even though they lack human-like reason and intent. Ultimately, algorithms produce legal effects (*atsar hukmī*), making them functionally equivalent to the acts *of a* legally *accountable individual* in terms of the legal consequences they generate.

However, although this study classifies algorithms as *khitāb taklīf*, it does not rule out the possibility of system *failures* that are truly beyond human control, such that neither can be held accountable. programmers nor users In such cases, if the algorithm operates abnormally due to technical anomalies or unpredictable third-party intervention (*hacking*), the fiqh principle *"al-Musyaqqah tajlibu al-taisīr"* (Hardship brings ease) and *"Lā dharara wa lā dhirār"* (one must not harm oneself or others).

If a loss occurs due to a digital *force majeure*, legal liability cannot be absolutely imposed on *the mukallaf* as the subject *of the obligation*. This is where Jasser Auda's systems theory offers a solution through the concept of multi-dimensionality; that is, recognizing that every digital event involves complex layers of cause and effect. Legal liability remains grounded in the principle of justice. If there is no element of negligence (*tafthīr*) or intent (*ta'ammud*) on the part of humans, then claims for damages must be resolved through systemic mechanisms such as digital insurance or a *social safety* net, rather than merely judging the legal subject personally.

CONCLUSION

First, this study concludes that algorithms are not merely technological tools (*khitab wad'i*). Rather, their roles and functions represent human will and actions, thereby possessing moral value and legal implications. The operation of algorithms involves intentions, objectives, and decisions embedded by humans through data logic. Therefore, algorithms can fall under the category of *khitab taklif*. Consequently, Allah's divine *command* is directly related to algorithms, which inherently form part of *the actions* of their creators, users, and controllers.

Second, the dialogue between classical usul fiqh and systems theory reveals that Islamic law views algorithms in a systemic and multidimensional manner. By employing Auda's six system elements, algorithms are entities connected to human social, economic, and moral

contexts. Consequently, Islamic law can engage with technology in an open, holistic, and adaptable manner, keeping pace with the times without compromising *the maqasid al-shari'ah*.

Third, this research contributes to the development of digital economic fiqh. By positioning algorithms as *fi'l al-mukallaf*, Islamic law gains a new foundation for assessing justice, public interest, and moral responsibility in the digital realm. This approach bridges classical texts with modern technology. It also broadens the horizons of ijtihad so that the complexities of Islamic ethics and law in the algorithmic era can be accommodated. Thus, digital fiqh becomes not only a normative discourse but also a new paradigm for applying Sharia values in a digital world that is constantly evolving and developing.

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