VII. Reason and Science

In the preceding chapters, science and religion have been argued to be dichotomous categories. Their conception fundamentally depends on the methods of their distinction from their counter-concept. In my analysis of Khan's works, I discussed an approach which took religion and, in particular, Islam as its point of departure, while science was perceived as a touchstone. Shibli, on the other hand, argues that Islam be seen as the unaltered touchstone. Yet, neither author explicitly defines his conception of science. Khan seems to surmise that science is a universal category which does not require any introduction. Even Shibli, whose approach originates from the discussion and questioning of science, does not define the subject matter of science, but merely its associations. He does not seek a shift in the definition of science, but rather a shift in its sole attribution to Europe.

As stated prior, both of these approaches respond to the thesis of conflict between science and religion. Khan as well as Shibli aim to disprove this claim by presenting Islam in such a way that conflict may be transformed via the delineation of distinct spheres. That said, I have argued above that this bifurcation of the spheres of science and religion is inconsistent. As discussed, the religious sphere rather tended to transgress its own realm while the scientific sphere was rather subordinated as a subcategory or, at least, supporting category of and within religion.

Because the preceding chapters have refrained from specifying what the counter-concepts of religion precisely entail for Khan and Shibli, the present chapter will closely examine their conceptions of science. With regard to these two authors' writings, my aim here is to analyse whether or not, and to what extent, science is a concept in a process of negotiation, and, as equally contested as religion. Neither Khan nor Shibli, however, discuss this topic explicitly, and rather seem to presuppose science as a universal which does not require further specification. I will thus examine excerpts of their texts in which they develop their epistemology. On this basis, I hope to draw conclusions regarding their conceptions of science, which shall provide further insights into their conceptions of religion.

1. Epistemology

Both, Khan and Shibli emphasise observation (*mušāhadah*) and experience (*tajribah*) as a means to gain knowledge. They herewith aim to distance themselves from Greek philosophy, which Shibli describes as a mere "jugglery of words" (*lafẓī ulaṭ pher*) without a connection to reality.[1] In the following sections, I will relate the work of two epistemological theorists to the authors' critique of Greek philosophy.

1.1 Khan

In his article "*ʿAqaʾid-i maẕhab-i Islām*" (*The Tenets of Islam*), Khan presents a concise description of the steps to knowledge and certainty. He distinguishes between two causes evoking thought or ideas (*ḫayāl*) in the mind. The first is described as self-produced in the mind, lacking any external trigger or reference. Such ideas are disproved as illegitimate, for these thoughts cannot be verified through experience (*tajribah*) and are thus a mere imagining – (*hamārī tabīʿaton ne paidā kiyā ho*) without external and, hence, verifiable reference (*asbāb-i ġair-muḥaqqaqah se*). Yet, this kind of thought is not declared as inherently and necessarily wrong; it is, however, inappropriate for gaining certainty, as this type of thought can potentially be proven wrong after attempts at verification through experience. The second type of thought, on the other hand, is evoked by an external trigger. This type is verifiable through experience: it is not mere imagining, but rather refers to external perception.[2]

According to Khan, this kind of thought cannot be proven wrong, as it is, in contrast to the first type, "after experience" (*baʿd tajribe ke*), which he does not tire of repeating:

> But the ideas of the second kind, that is those which neither our nature produces spontaneously nor are born in us by the [merely] ideal, unauthenticated causes, rather which other authenticated realities (*ḥaqāʾiq-i muḥaqqaqah*) have brought forth – these are enduring and are "after experience," totally in accordance with fact.[3]

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1 Nomani: *Maqālāt-i Šiblī* (Aʿẓamgaṛh), Vol. VII, 38f.
2 Khan: *Maqālāt*, Vol. I, 11f.
3 Trol: *Sayyid Ahmad Khan*, 261 / Khan: *Maqālāt*, Vol. I, 11f.

Consequently, the decisive difference between the two types of thought is found in their relative connection with experience and an external reality allowing for verifiability, as mere imagination cannot necessarily be linked to and verified in reality. Because imagination is free-floating, it can thus be proven wrong after attempts toward verification.

With regard to human reason, Khan defines the medium used for acquiring knowledge and certainty as ʿaql. Thus, he defines ʿaql in another text as the investigation of nature or natural sciences (taḥqīqāt-i ʿulūm-i ṭabīʿat).[4] But while Khan proposes sensory perception as the faculty for gaining knowledge, the effective activity of ʿaql still remains hazy. Khan does not define the exact function of ʿaql, nor the role it plays in the process of gaining knowledge. The process of cognition itself is not further described. One possible conclusion of the process presented above, which Khan himself presents as rational, suggests that we identify the role of ʿaql as the process of verifying a thought in its conformity to external reality. Therefore, the role of ʿaql is not the spontaneous advent of an idea, but the active process of probing and linking the thought with external reality. Khan thus distinguishes the process of gaining knowledge and certainty from the spontaneous advent of a thought of the first kind. Due to its verifiability, the second type of thought is described as rational.

On this basis, Khan describes the acknowledgement of God as the one Creator of the world as a rational insight. For, according to Khan, an investigation into nature doubtlessly suggests the existence of an order and arrangement in the world which cannot be coincidental. As the argument goes, if a structure is perceived anywhere, the conclusion will consequently be that the structure does not exist coincidentally, but has rather been arranged by someone. Khan thus proposes the acknowledgement of God as a rational conclusion drawn from his perception that such a structure exists in the world:

> Whenever we find several things in one place arranged in order and adorned beautifully we are certain that there is someone responsible for doing this. Accordingly when we see all the existing things in such wonderful order, made by such wisdom and moulded in such beauty, then we can believe with certainty that there is an Arranger and Maker.[5]

The acknowledgement of God's existence is, thus, according to Khan, not of the first category of thought or, in other words, a thought unrelated to the observation of external facts evoked merely in the human mind. It is rather of the second category: for only the perception of an arrangement in the world triggers the idea of

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4 Khan: *Maqālāt*, Vol. III, 234.
5 Troll: *Sayyid Ahmad Khan*, 261 / Khan: *Maqālāt*, Vol. I, 12.

someone's creation rather than the idea of mere coincidence. This acknowledge-ment is evoked only "after experience" and, thus, is verifiable. Consequently, it is an ascertained thought which can be relied on with certainty:

> Our idea of God's existence has been brought forth by things which are a reality, which are, in other words, authenticated truths. Ideas of this kind [i.e. the second kind of thought, verifiable on external facts] are always found to be correct and, "after experience," in conformity with fact. Therefore, we, too, believe firmly in this idea and maintain that since and insofar as it is "after experience," this our idea will be fully according to fact and for this reason we do not call it an "idea," but rather a certain fact.[6]

To conclude, Khan distinguishes between two types of thought, the first one being unrelated to external facts and a mere imagining of the mind which can be dis-missed as uncertain. Only the second type, however, can ensure certainty through its link to observed experience. In distinguishing these two types of thought, Khan aims to prove the acknowledgement of God's existence as a rational and ascer-tained insight, verifiable through external facts.

1.2 Shibli Nomani

In his article "*ʿUlūm-i jadīdah: ʿilm kī ḥaqīqat*" (Modern Science: An Account on Knowledge), Shibli introduces his epistemology by criticising the conception of knowledge proposed in Greek philosophy. According to Shibli, Greek philosophy conceives of knowledge as the Idea or Form of something (*kisī cīz kī ṣūrat*) which appears in one's mind. This Form is perceived as a mental imagining of a particu-lar thing and serves as a reference point.[7]

Shibli then criticises the assertion of the Forms as self-contained entities and, instead, argues that they are a composite of former (i.e. individual) perceptions. These perceptions are remembered and form the basis for the imagining of Forms. Thus, he distinguishes three types of perception: the first type, *iḥsās bi-al-fiʿl*, is the immediate sensory perception of an object. The second type, however, is a combination of direct (*iḥsās bi-al-fiʿl*) and recalled (*iḥsās-i sābiq*) perceptions re-lated to a former sensory input. In this case, only some qualities of an object are

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6 Troll: *Sayyid Ahmad Khan*, 261f. / Khan: *Maqālāt*, Vol. I, 12f.

7 Nomani: *Maqālāt* (Lakhnaʾū), Vol. I, 54f. This vague terminology plainly referring to Greek philosophy as a whole is owed to Shibli's explanations and will be critically dis-cussed in the following analysis.

perceived immediately while the remaining qualities are complemented through remembrance of former sensory perceptions. Shibli gives the example of *seeing* an apple, which evokes one to remember the *taste* and *smell* of such an apple from previous perceptions of other apples. Thus, the visual quality of the object is perceived immediately while the qualities of taste and smell are recalled perceptions, not directly related to the present object. The third type is an entirely recalled perception (*iḥsās-i sābiq*) and, thus, a mere imagining (*maḥẓ taṣavvur*).[8]

While Shibli acknowledges direct sensory perception (*iḥsās bi-al-fiʿl*) as certain and definitive (*qaṭʿī aur yaqīnī*), he dismisses recalled perceptions (*iḥsās-i sābiq*) as uncertain, for the recalling of former perceptions is potentially wrong due to erroneous remembrance. This dismisses not only the third type, but also the second type of combined perception:

> A common misunderstanding concerning the character of perception and sensation is that when we, for example, see an apple and state to have become aware [*ʿilm hūʾā*] of the [category] apple, we assume that this knowledge is self-evident, since we have gained it by means of external sensation [i.e. vision]. But the error in this assertion is that the knowledge has not been gained only by sensation. The senses have perceived only colour and shape. Since the remaining [sensory impressions], taste and smell, had already been perceived once before, we assumed [*qiyās*] that if the shape and colour is the same, then analogously the taste and smell will be the same as well. Thus, only shape and colour have been perceived sensually whereas the remaining perceptions are only recalled.[9]

Thus, he refutes the Greek philosophers' assertion that the self-contained entity of a Form or Idea (*ṣūrat*) in one's mind can be described as knowledge, as it is not certain. It is, rather, an imagining (*taṣavvur*) recalled from memory – potentially resulting in a distorted remembrance.[10]

In a second step, Shibli aims to point out one more error related to the Greek conception of knowledge and their theory of cognition. He emphasises that the mind's imagination is no material entity, lacking any autonomous existence. The initial assertion of independent, self-contained Forms (*ṣūrat*) in Greek philosophy as a source of knowledge is thus dismissed, for Form is a mere abstraction derived from material objects.

On the basis of these imagined Forms, general categories (*kulliyāt*) are established. In perceiving several objects which share commonalities, they are conceived of as particulars of a common category. Remembered perceptions are thus

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8 Ibid., 55.
9 Ibid., 55f.
10 Ibid., 56.

compound. From this, Shibli argues that the Greek Forms are, in fact, not even imaginings (*taṣavvur*), but rather constructs of human reason (*taʿaqqul*):

> General categories [*kulliyāt*] are in this way perceived so that we see several particulars [*juzʾiyāt*], in them we will observe some commonalities – these similarities are no separate entity [*maujūd-i ḫārijī*] [of their own] nor do they conform to any external entity [*maujūd-i ḫārijī*], but [this process] is rather a cognisance [*vajdān*] which is established in observing several particulars and their mutual commonalities. This cognisance is called *taʿaqqul* and facilitates the perception of general categories.[11]

Shibli here again emphasises that commonalities cannot be perceived from any external entity but inevitably have to be drawn from the particulars. Thus, no spontaneous inspiration facilitated by abstract Ideas or Forms can provide the cognisance of general categories, but only the observation of particulars and the extraction of their mutual commonalities after one has separated the particular's individualities.[12]

In summary, Shibli's theory of cognition emphasises two insights which he excavated in his criticism of Greek philosophy. Firstly, he proposes that the human being gains knowledge only by access to the material world, for, secondly, the Greek concept of universal categories or forms in fact offers constructs of the human mind without their having any separate existence of their own. Thus, general categories cannot be perceived as self-evident observations, but must be drawn from the observation of particular entities and their commonalities.

1.3 *Qiyās*

In the preceding paragraphs, I have discussed two theories of cognition which are in some respects similar. Khan, distinguishing between two types of thought – the first being evoked merely in the mind without any point of reference in reality, and the second being triggered by a perception and, thus, verifiable – emphasises the necessity of an experiential point of reference. For Khan, only "after-experience" perceptions are acknowledged as certain. Shibli, in a similar vein, generally identifies two types of perception: *iḥsās bi-al-fiʿl* being the active perception of things present and *iḥsās-i sābiq* being the remembrance of past perceptions. He, too, dismisses the latter type as uncertain due to a possibly inaccurate remembrance and

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11 Ibid., 57.
12 Ibid.

instead emphasises the perception of the material world as the sole means of certain cognisance. Thus, both criticise remembered perceptions or self-produced thoughts as uncertain and instead acknowledge the certainty only of sensory impressions related to the material world. That said, Shibli also introduces an intermediate category in his theory, which combines the aforementioned general types. The *iḥsās-i murakkab* merges the *iḥsās bi-al-fiʿl* and *iḥsās-i sābiq*. This process and its criticism will be the topic of the next paragraph.

Shibli defines the *iḥsās-i murakkab* (compound perception) as the partial perception of a present object (*iḥsās bi-al-fiʿl*). However, not all perceivable qualities are, in fact, perceived in this process. The remaining qualities are not actively perceived, but only remembered from past perceptions (*iḥsās-i sābiq*). In *iḥsās-i murakkab*, only syllogism (*qiyās*) allows one to combine the partial perceptions with past perceptions in order to receive a complete perception of an object. The partially active perception of a present object is assigned to a general category (*kulliyāt*). This general category has been formed by filtering for the mutual commonalities of particulars. These commonalities, then, are imagined as a general category. Through the assignment of the qualities of a partial perception to a specific category, the missing qualities can be analogously recalled from the past perceptions preserved in the composite general category:[13]

> Now if an object is not present in front of us, but we have already perceived its different properties once before, and if it, thus, evokes an idea (*ḫayāl*) of the object in our mind, then this is imagination [*taṣavvur*].[14]

However, as has been described above, Shibli dismisses the certainty of imaginings, as they do not have an existence in and of themselves, but rather offer recalled, former perceptions which are, thus, not separately perceivable. They are a mere remembrance. Thus, for Shibli, the unique, certain source of perception can be assigned only to material objects which are perceivable both actively and immediately.

Moreover, Shibli perceives a decisive distinction between modern science and philosophy which is marked by their respective reasoning. The main point of his critique against Greek philosophy is *qiyās*:

> [N]owadays it is claimed that ancient philosophy rested on syllogism and suspicion [*qiyāsāt aur ẓanniyāt*]. […] In contrast, modern philosophy [*falsafah-i jadīdah*, i.e.

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13 Ibid., 55f.; cf. also *EI*: "ḳiyās."
14 Nomani: *Maqālāt* (Lakhnaʾū), Vol. I, 56.

in Shibli's terminology modern science[15]] is based entirely on experience and ob-servation [*tajribe aur mušāhade par mabnī*].[16]

Shibli therefore contrasts science and philosophy on the basis of their respective methods of reasoning. He criticises ancient philosophy for resting entirely on syllogism and, thus, suspicion. His critique explains that certain knowledge cannot be gained by means of *qiyās*, as it rests on former, remembered perceptions. By contrast, the reasoning of science rests, according to Shibli, entirely on observation and, consequently, on active instead of past perception.

Similarly, Khan criticises Greek philosophy for its lack of reference to experienced reality:

> The philosophy which is still left with us is, in reality, taken from the Greeks who were idolaters. The topic of this philosophy is mostly concerned with unknown things and a great extent pertains to imagined topics. […] No ascertained knowledge can be gained from it.[17]

In his opinion, Greek philosophy is ensnared in imagined problems and arguments unrelated to reality. Instead, Khan recommends the study of modern science as a means to gain certain knowledge:

> The new sciences which came to India with the Englishmen are not merely rational [*ʿaqlī*] nor do they concern theology [*ilāhiyāt*]. They investigate in the essence [*ḥaqīqat*] of things present [*ašiyā-i maujūdah*] […].[18]

Khan, not unlike Shibli, thus criticises the lack of reality in Greek philosophy and, instead, advocates modern science's reference to things present. However, Khan's notion of *ʿaql* in this quote is quite striking. For, in this context, *ʿaql* apparently turns out to be the object of distinction between Greek philosophy and science. Khan advocates for science on the grounds that it is "not merely rational" (*ʿaqlī*). This conflicts with Khan's entire argument from his other texts, where he explicitly argues for Islam's rationality in order to present the conformity of science with Islam. Science is, therefore, inextricably related to rational reasoning. In the following quote, for example, Khan describes the function of *ʿaql* – quite in contrast to the above quoted paragraph – as the observation of nature:

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15 Cf. Chapter 6.
16 Nomani: *al-Kalām*, 7.
17 Khan: *Maqālāt*, Vol. I, 271.
18 Ibid., 150.

[B]y *ʿaql* are meant those concerns which have been discovered by means of rational argumentation [*mubāḥaṣ-i ʿaqlī*] or the investigation of natural science [*taḥqīqāt-i ʿulūm-i ṭabīʿīyāt*].[19]

The above quoted employment of the term rather implies a concept of *ʿaql* which comes to conclusions unrelated to the material world while the latter quote and the majority of references suggest an investigative character of reason. *ʿAql* has apparently experienced a shift in meaning.

The following paragraphs will, thus, seek to disentangle this overlap of contradictory notions attached to *ʿaql* in the course of confrontations with science, the goal being to excavate both Khan's and Shibli's view of science.

Considering the above presented critique of syllogism (*qiyās*) as the most crucial characteristic of reasoning in Greek philosophy, Khan as well as Shibli aim to present an epistemology that allows for a link with scientific reasoning. The following paragraphs attempt to put their concepts of scientific reasoning in a historical context and locate their approaches within this context.

2. Rationalities

The task of further qualifying the different rationalities of science versus ancient/Greek philosophy – as mentioned in the texts of Khan and Shibli – is not an easy one, as both authors tend to mention their sources only sparingly. In particular, Khan keeps the reader in the dark regarding his sources. His later texts make virtually no source references. Even though Shibli gives more references, still the identification of his sources often remains a very difficult task. Though he mentions some names, he tends to give no further details about the authors or their works, which raises questions a on the extent to which he was acquainted with the authors' texts and theses. This complicates any assessment of the impact of such theses as well as the evaluation of Shibli's interpretations. Nevertheless, the goal here shall be to concretise the threat of science to which both Khan and Shibli felt obliged to respond.

Shibli, at least, mentions one concrete source, Francis Bacon (1561-1626), whom he apparently identifies as a personification of the threat of science:

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19 Ibid., Vol. III, 234.

> The attack by Greek philosophy which confronted Islam obviously has been re-
> pelled with great strength. Now, is Islam not even more in danger in view of Ba-
> con's philosophy?[20]

Shibli compares the threat of Greek philosophy, which Islam had to face in its
early history, with Bacon's philosophy. That said, he does not give any further
remarks about Bacon's philosophy or in what sense it confronts Islam:

> The destruction of Ibn Rushd and not only Ibn Rushd but rather of Greek and an-
> cient philosophy, in general, has been brought by Bacon whose works were pub-
> lished in 1597. Ancient philosophy was based on syllogism [*qiyāsāt*] and suspicion
> [*mauhūmāt*]. Bacon declared this way [of reasoning] as null and void and built the
> basis of knowledge on the ground of observation [*mušāhadāt*] and experience
> [*tajribāt*].[21]

Shibli here once again emphasises the key words of observation and experience
versus the syllogism and imaginative character of Greek/ancient philosophy.

Even though Khan does not explicitly refer to any source for his conception of
science, his striking use of the same key words as Shibli – and a very similar theory
of cognition – makes it reasonable to assume that he, too, takes Bacon as his point
of reference. Troll affirms this assertion in his book *Sayyid Ahmad Khan*, wherein
he mentions the book, *Risālah-i inʿāmī*, written by ʿUbaidallāh ʿUbaidī in 1866,
which was included in Khan's personal property. Therein, according to Troll, the
author gives – among other things – an outline of Bacon's *Novum Organum* and
contrasts Bacon's experimental method with the syllogistic approach of ancient
philosophy.[22]

In order to qualify this contrast between ancient philosophy and modern sci-
ence, and concretise the conceptual background which is implied by the ubiquitous
key words of *qiyās* (syllogism) versus *mušāhadah* (observation) and *tajribah* (ex-
perience), I will give a concise outline of Greek philosophy in the following para-
graphs. This outline will offer a more differentiated presentation of the oversim-
plified definitions of the discipline employed by Khan and Shibli. Furthermore,
this section shall provide the basis on which to present Bacon's approach, as his
approach to some extent lies within the tradition of Greek philosophy that he sim-
ultaneously heavily criticises.

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20 Shibli Nomani: *Bāqiyāt-i Šiblī* (Lāhaur: *Majlis-i Taraqqī-i Adab*, 1965), 16.
21 Nomani: *Maqālāt* (Aʿẓamgaṛh), Vol. V, 60f.
22 Troll: *Sayyid Ahmad Khan*, Fn. 93, 168. Unfortunately, I could not include the men-
tioned book.

2.1 Rationalism in Greek and Muslim Philosophy

The philosophical tradition in Islam is, among various other influences, to a large extent based on Plato's and Aristotle's philosophy. Each are commonly described as claiming two contradictory epistemologies. However, when the first Muslims came in contact with Greek philosophy, they found in Neoplatonism – the hitherto most prominent still-extant school of ancient philosophy – a long tradition of the reception of both philosophers. Neoplatonism is characterised by its effort to reconcile the conflict in Platonic and Aristotelian epistemology which was pursued by most Muslim philosophers.[23] Since it is not possible to give a comprehensive overview of the entire tradition and various interpretations of Muslim philosophy within this project's scope, and because neither Khan nor Shibli refer to any particular source in their texts, this outline will be very general. However, since both frequently refer to Ibn Rushd as their eminent source in the philosophical tradition – if in other contexts – it seems reasonable to assume the impact of his thought in this area of their writings, as well. Thus, after presenting a concise outline of the Platonic and Aristotelian epistemology, Ibn Rushd's interpretation shall be summarised accordingly.

2.1.1 Plato

Plato distinguishes between two types of knowledge: δόξα and ἐπιστήμη. δόξα is perceived as true belief. The person having δόξα knows something, but without being able to explain a particular case form his own experience. He has to refer to someone else's knowledge. Thus, Plato disclaims this kind of knowledge as mere belief which, nevertheless, might be true. But only individual comprehension can be called knowledge. The latter type ἐπιστήμη is characterised by the ability to explain and define a particular case through reference to a standard.[24] However, Plato emphasises that this standard cannot be derived through sensation of the material world, but only through reason, for natural things never conform perfectly to the abstract and immaterial standard which he calls Form. Natural things are thus treated with suspicion:

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23 Peter Adamson, and Richard C. Taylor: "Introduction," in *The Cambridge Companion to Arabic Philosophy*, ed. Peter Adamson and Richard C. Taylor (Cambridge: Cambridge University Press, 2004), 4.

24 Mary Tiles, and Jim E. Tiles: *An Introduction to Historical Epistemology: The Authority of Knowledge* (Oxford: Blackwell, 1993), 16.

> This standard is not to be found by examining particular things in the natural world. [H]e would insist that however round an object may be, it will always be possible to find one which is more (perfectly) round.[25]

Based on the assumption of the geometry of his time that geometrical forms can be defined exactly, Plato claims that the approach to geometry can be transferred to a general practice for identifying forms as standards for any kind of knowledge. In his opinion, mathematicians arrived at general definitions via a dialectic approach of hypothesising and the gradually modifying such a hypothesis, consequently coming to an agreement which satisfies all raised objections so that all mathematicians could acknowledge a universal definition. Plato claims that this possibility of exactitude and universality in definition is not confined to geometry, but can be achieved by means of the dialectic approach in any field of knowledge.[26]

However, this approach raises concern about the reliability of a definition arrived at through dialectic. One could discount the definition as a mere convention which lacks any entitlement to universality. Plato repels these doubts by introducing the Form of the Good:

> This Form of the Good stands in a unique relationship to all the other Forms and a grasp of the Good itself is needed to underwrite any account given of any other Form.[27]

Any definition, Plato claims, which does not refer to the Form of the Good cannot claim to be complete. To understand the Good of a thing implies that one grasp its purpose and "how it is supposed to be so that it fulfils its function."[28]

In his famous allegory of the cave, Plato further clarifies the role of the Form of the Good. In this allegory, people are imagined as being chained to a wall inside of a cave. On the opposite wall, they can see the shadows of objects placed outside the cave. Some of the prisoners can release themselves of their chains and leave the cave. Outside, they catch sight of the actual objects, the shadows of which they saw in the cave, and realise that the knowledge they acquired while chained to the wall was not related to the real objects, but only to their shadows. Plato compares this to knowledge of the material world acquired through sensation. This

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25 Ibid., 17.
26 Ibid., 21f.
27 Ibid., 23.
28 Ibid., 23.

knowledge does not reach the realm of ἐπιστήμη, but is only the reflection of the real knowledge of the Forms.[29]

Continuing with the allegory, Plato mentions a fire which is placed behind the objects and, in this way, makes the shadows in the cave visible. He identifies this fire with the Form of the Good which enables one to comprehend the other Forms. The objects of the material world, however, are merely hazy reflections of the immaterial and perfect Forms:

> The Good is said to be the source of the "being and reality" of the objects of understanding […].[30]

This linkage of the Forms to a singular and universal principle allows for the closure of the system and the limitation of possible definitions by detaching the Forms from the individual and attaching them to the singularity of the Form of the Good. This allows for the assumption of a universal structuring of the system, consequently singularising and universalising the Forms. It is not that the individual concludes or mentally creates the Forms, but that he recognises them, or rather remembers them. For, according to Plato's theory of the soul, the soul was acquainted with the Forms before its conjunction with the body and its transference to the material world.

2.1.2 Aristotle

The preceding section showed that Plato's epistemology has a top-down orientation. The material world is regarded as misleading, whereas only the pure, immaterial Forms allow one to achieve true knowledge. However, the process of reaching those Forms through reason must not be misunderstood as an active or creative reasoning of the human mind, but can rather be compared to remembrance. Forms are, thus, conceived as separate entities which can be observed.

Aristotle, unlike Plato, doubts the self-contained existence of the Forms and states that knowledge is always based on the material world as the single means which is approachable for men. Every insight inevitably begins with observation. Aristotle divides this inductive approach into four stages. In the first stage, perception is preserved, hence, generating memory. In the second stage, memory then allows an individual to recall previous perceptions independently of their material

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29 Ibid., 18.
30 Ibid., 23.

appearance. However, the decisive third stage is experience (ἐμπειρία, from which the English "empiricism" is derived). This is the momentum of unity: the remembrance of repeated perceptions of similar objects is unified in a single, generalised abstraction. This empirical knowledge affects future behaviour patterns. But it must not be misconceived as conceptualisation, which occurs only in the fourth stage. In this stage of art, as Aristotle calls it, the empirical knowledge of the remembered, repeated perceptions is examined with regard to mutual commonalities. This last stage differs from the preceding insofar as that the third stage of experience provides mere factual knowledge of repeated occurrences or perceptions, whereas only the fourth stage can reveal the shared causality:

> Aristotle illustrates the difference between experience and art on the example of disease: The experience teaches that several people have been cured of a particular disease with a particular drug. However, it does not reveal by which shared quality of the drug the medication was effective. […] The knowledge of this relationship characterises art in comparison to empirical knowledge.[31]

Thus, knowledge of the fourth stage conceptually grasps the multiplicity of empirical knowledge by isolating the mutual commonalities and unifying them in a single intelligible.[32]

In contrast to Plato's Forms, Aristotle hence conceives of intelligibles not as self-contained entities, but rather as abstractions fundamentally dependent on the observation of the material world. Only bottom-up induction provides access to knowledge. This, however, culminates in a problem similar to that mentioned above in Plato's epistemology concerning the universality of conception. For, if no common Forms exist and if the intelligibles are a product of the human mind, an abstraction of its perceptions, is knowledge then, consequently, the individual result of an entirely individual process of perception? Is knowledge possible at all if there is no uniformity in cognition?

Aristotle would answer this difficulty with a reference to his distinction of two kinds of knowledge: argumentative knowledge (ἐπιστήμη) and intuitive comprehension (νοῦς). The former is based on *a priori* presumptions and can thus serve only for approval or disapproval within an enclosed system. It does not explain, however, how knowledge is possible beyond a merely individual limit.[33] In this context, Aristotle's concept of intuitive comprehension (νοῦς) and his presumption of primary principles is crucial. He argues that the generality of intelligibles

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31 Christian Jung: "Prinzipienerkenntnis nach Aristoteles: Zur Deutung von Analytica Posteriora II 19," *Salzburger Jahrbuch für Philosophie* 60 (2016): 83.

32 Ibid., 83ff.

33 Ibid., 93.

cannot be a natural, prenatal awareness, as Plato would argue. Aristotle instead states that any object inherently contains the potential of generality. The world is thus arranged via a structure which is intuitively perceived by means of νοῦς. The above described process of induction is, hence, the gradual process of awareness caused by the repeated perception of similar objects and the separation of their commonalities by means of memory.[34]

Aristotle argues that no wrong perception can exist, as the process of perception is no individual act of reasoning, but rather guided by νοῦς and the universal structure of the cosmos. νοῦς perceives the generality in the observation of material objects – no individual interpretation can misguide this process. Hence, perception cannot be wrong – either something has been perceived or it has not. Only conclusions drawn from such intelligibles can be individually misleading.[35]

By unlinking the act of perception from the individual, Aristotle maintains the possibility of acquiring knowledge, as only universal intelligbles provide the possibility of interaction and communication. Yet his approach differs from Plato's assertion of self-contained Forms being separate from the material world. On the contrary, Aristotle emphasises the material world as the single means of obtaining access to knowledge. In further contrast to Plato, however, he maintains the necessary universality in the structure of the cosmos, according to which the material world is perceived by means of νοῦς. This bypasses subjectivity in the process of perception and provides its universality. The access to truth is, thus, similar to Plato's depiction of the same: singularised, as individual reasoning is governed by an external faculty.

The question of the possibility of knowledge is, however, answered only with a circular argument: Aristotle argues that first principles are intrinsic to the possibility of knowledge. Nevertheless, the effort to prove them would unavoidably result in infinite recourse, as the argumentative knowledge (ἐπιστήμη) of such proofs can only be effective within an enclosed system in which first principles already been approved, as has been shown above. Consequently, he argues, the first principles must be beyond argumentative knowledge (ἐπιστήμη) and can be proved only with respect to their supply of true results. This, however, singles out νοῦς from the possibility of verifiability and puts it in the position of *a priori* presumptions which have to be acknowledged in order to close the system. Only after providing an enclosed system can νοῦς be argued as inevitable. This necessarily culminates in a circular argument.[36]

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34 Ibid., 91.
35 Ibid., 95.
36 Ibid., 91-94.

2.1.3 Ibn Rushd (1126-1198)

As has been highlighted earlier, it is quite probable that Khan and Shibli were influenced by Ibn Rushd's theory of the intellect. For, in other contexts, they each mention Ibn Rushd as a crucial source. However, in their respective theories of cognition, neither man gives any references regarding their sources. Thus, even if Ibn Rushd might have been an important source for their theories of cognition, the extent to which they were acquainted with his texts remains unclear. Additionally, the fact that Ibn Rushd's work is not entirely consistent internally further complicates a definitive conclusion. Thus, due to limitations within this scope, Ibn Rushd's works shall be introduced only very concisely with respect to two aspects of his teaching relevant for the present study.

Ibn Rushd's work can be divided into stages beginning from a continuation of his predecessors in Muslim philosophy, in particular Ibn Sina and Ibn Bajja, and moving gradually towards a return to the texts of Aristotle.[37] It will not be possible to demonstrate this shift in its complexity here, but I will instead illustrate this development with respect to his theories of intellect and emanation.

Like Aristotle, Ibn Rushd criticises Plato's concept of self-contained Forms independent of the material world, and emphasises the inevitable reference to the inductive process of observation. Only through a universal principle, the active or agent intellect (*ʿaql faʿʿāl*, parallel to νοῦς), is the acquisition of knowledge deemed to be possible. In addition to this universal type of intellect, Ibn Rushd distinguishes one more type, the material, which he identifies as passive or potential intellect perceived as an individual human faculty.[38] The role of these two types, however, varies during the different stages of the development of his thought. In his article "Averroes," Richard C. Taylor distinguishes three stages of Ibn Rushd's theory of intellect. The first stage is still very much influenced by Ibn Bajja's interpretation, emphasising the individual's propensity to achieve knowledge of the intelligibles by means of the material intellect, which perceives the potential Forms through sensation. In his later stages, Ibn Rushd dismisses this interpretation, for situating the production of the intelligibles in the individual material intellect raises the question of the possibility of the intelligibles' universality.

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37 Herbert A. Davidson: *Alfarabi, Avicenna, and Averroes, on Intellect: Their Cosmologies, Theories of the Active Intellect, and Theories of Human Intellect* (New York, Oxford: Oxford University Press, 1992), 220.

38 Arthur Hyman: "Averroes' Theory of the Intellect and the Ancient Commentators," in *Averroes and the Aristotelian Tradition: Sources Constitution and Reception of the Philosophy of Ibn Rushd (1126 - 1198); proceedings of the Fourth Symposium Averroicum (Cologne 1996)*, ed. Gerhard Endress (Leiden, Boston, Köln: Brill, 1999), 368f.

Thus, he returns to an interpretation more in concordance with Aristotle and transfers the process of conceptualisation to a universal and eternal principle, subsequently refusing his former assertion of the individuality of the material intellect:[39]

> The final position of Averroes on intellect is found in his *Long Commentary* (ca. 1190), where he rejects the notion of a plurality of individual material intellects, argues for a single eternal material intellect for all humankind […].[40]

Consequently, Ibn Rushd abandons the emphasis on individuality from his earlier stage in favour of acknowledging the universality of the process of cognition, thus ensuring the generality of the intelligibles:

> The problem with the accounts of the earlier commentaries was that their plurality of immaterial receptive intellects meant a plurality of intelligibles in act without the same intelligible being understood by each human being. If two humans are thinking of the same intelligible, for example, a teacher and a student, then they cannot be thinking about two different intelligibles.[41]

Likewise, Ibn Rushd turns against his predecessors, in particular Ibn Sina, with respect to the theory of emanation. Emanation is a widely acknowledged theory inherited from Neoplatonism to explain the plurality in the world out of the One, the originator of the cosmos, which is identified as God in Muslim philosophy. The theory of emanation is based on the distinction of two realms: the material and the immaterial world. Both are, however, perceived as being linked. This link is the subject matter of metaphysics introduced through Aristotle's *Metaphysics* – which, however, remains quite vague, thus generating vigorous debates on its interpretation.[42] These two realms are not conceived of as entirely separate, for this would imply a duality of eternal principles. Thus, the world cannot be perceived as a distinct entity, but must be originated in the One. Without expanding on the theory and its various interpretations, Ibn Rushd's general assertion is that "from the First all other beings and the heavenly world in the first place derive by a pro-

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39 Richard C. Taylor: "Averroes: Religious Dialectic and Aristotelian Philosophical Thought," in *The Cambridge Companion to Arabic Philosophy*, ed. Peter Adamson and Richard C. Taylor (Cambridge: Cambridge University Press, 2005), 190-194.

40 Ibid., 192.

41 Ibid., 192.

42 Charles Genequand: "Metaphysics," in *History of Islamic Philosophy*, ed. Seyyed H. Nasr and Oliver Leaman (London: Routledge, 1996), 1383f.

cess generally designated by the name of emanation (faẏḍ lit. 'flowing' or 'over-flowing'). This emanation results from the mere existence of the First […]."[43] The process is described as follows:

> From the First emanates the Second (intellect); by thinking the First, it gives rise to the Third, and by thinking itself it gives rise to the first heaven. The Third in turn, by thinking the First, produces the Fourth and by thinking itself produces the second sphere, that of the fixed stars. The same process repeats itself ten times, thus giving rise to the ten heavenly spheres and to the ten entities (intellects) following the first. The tenth intellect is the so-called Active Intellect (al-'aql al-fa"al) which is the last of the immaterial entities. It has not only a cognitive function as in the Greek tradition, but also physical and cosmological ones. By implanting the forms in matter it constitutes the final link between the heavens and the world of nature.[44]

Crucial in this quote is the emanation of the Forms in matter, which maintains the universality of perception by enclosing the system circularly.

However, Ibn Rushd later rejects this theory of emanation and instead refers to the theory of causality. As described in the preceding chapters, causation assumes that any occurrence must be caused by any preceding cause. This implies that causal chains must have a primary origin. Since any efficient cause, as Ibn Rushd argues, can proceed from only one causal agent, the chains can be retraced to the First Mover or Unmoved Mover. Nevertheless, if "from one only one proceeds", the question arises as to how plurality can emerge out of this mono-causal chain. Ibn Rushd replies:[45]

> Since the rule that from one only one proceeds applies solely to efficient causes, and the First Cause is not an efficient cause, the rule does not apply to it.[46]

Thus, he abandons the theory of emanation with the argument that the First Cause can have more than one effect. This, however, does not affect his theory of different intellects:

> He still identifies the active intellect as the last in the series of incorporeal intelligences, although the active intellect is no longer the outgrowth of a process of emanation.[47]

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43 Ibid., 1386f.
44 Ibid., 1387.
45 Davidson: *Alfarabi, Avicenna, and Averroes, on Intellect*, 256.
46 Ibid.
47 Ibid.

Hence, Ibn Rushd's philosophy is characterised by a shift from initially Neo-Platonist tendencies towards a focus on Aristotle: he abandons the thesis of emanation and perceives the intellect as universal.

In summary, it can be said that the epistemologies of Plato and Aristotle, in the first place, appear to be fundamentally contradictory. Plato, on the one hand, proposes a deductive epistemology disregarding sensory perception and the material as a point of departure for acquiring knowledge. In fact, observation is dismissed as being misleading on the way to higher, i.e. abstract and immaterial, knowledge of the essences – or, as Plato puts it – the Forms. On the other hand, Aristotle discounts the deductive procedure of pure reason and argues for an inductive approach. In his opinion, Plato's Forms are not self-contained entities which can be perceived by the application of reason. Only the material world can provide information about the intelligibles. Those are, however, derived from material objects, which, as parts of the universal structure of the cosmos, potentially contain the intelligibles. A universal sense of reason enables men to perceive the intelligibles out of material objects.

Herein lies the commonality between the two primarily contradictory approaches. From the perspective of universality, both approaches share some crucial aspects. Both presume the existence of a universal arrangement, a metaphysical structure which organises the cosmos according to a uniform and consistent system. They argue that only the assertion of universal, general concepts requiring an enclosed system provides the possibility of communication without a clash of individually derived intelligibles culminating in miscommunication. They therefore do not perceive the acquisition of knowledge as an individual process of reasoning, hence disclaiming subjectivity in experience, as the reason which enables one to gain knowledge is not an individual but rather a universal faculty. Reason is positioned outside of the realm of individuality, thus allowing for universally general concepts. These are derived by means of the universal reason deducing the uniform structure of the cosmos out of material objects, which inherently contain their essences.

Consequently, the access to truth is conceived of as singular in Plato's thought as well as in Aristotle's. Although both consider the acquisition of knowledge to be a gradual process, this does not pertain equally to truth. A better insight into the Forms, in Plato, or an augmented experience of material objects, in Aristotle, likewise implicates an increase of knowledge. This increase must be understood, however, merely as gradual approximation of the wholeness of the singular truth, for sensation and experience can reveal only one result. Moreover, perception cannot be wrong – either something is perceived or it is not. Thus, an increase of

knowledge can never mean the obsolescence of the preceding knowledge; it can only mean the additive enhancement and a closer proximity to the wholeness of truth. Hence, truth and its means of access are perceived as rigid and immutable.

2.2 Francis Bacon (1561-1626)

Bacon's philosophy, as has been shown above, is perceived as a crisis for ancient philosophy by Shibli and, presumably, by Khan, as well. Furthermore, both criticise the speculative character of ancient philosophy and emphasise observation and experience as the counter-approach of science, very likely drawing from the work of Bacon, a pioneer of the scientific approach. Thus, in the following, I will briefly examine Bacon's philosophy in order to obtain an idea of the character of science which Khan and Shibli were confronted with. Nevertheless, this analysis can only provide speculation on their conceptions of science, as it is not possible to assess their true acquaintance with Bacon given that the few indications in their texts which refer to Bacon as representative of modern science cannot be retraced. Their views on Bacon's work must remain hazy, as their sources could not be located in the archives frequented during the research for this study.

Bacon criticises the idealisation of antiquity in his time and argues that blind belief in tradition prevents progress.[48] In comparing the character of human understanding to the functions of a mechanical engine, he turns against Plato's Forms as well as Aristotle's inductive approach. The latter is criticised for basing broad, speculative claims on merely marginal observation. Based on minimal inductive observation, the entire Aristotelian system proceeds, according to Bacon, on merely deductive assumptions. Thus, rejecting the deductive as well as the inductive approach of antiquity as mere speculation, Bacon establishes an approach which is more so related to practically applicable knowledge.[49] He turns away from questioning the essence and process of cognisance towards knowledge itself and its improvement:

48 Wolfgang Krohn: *Francis Bacon* (München: Beck, 1987), 71.
49 Jatinder K. Bajaj: "Francis Bacon, the First Philosopher of Modern Science: A Non-Western View," in *Science, Hegemony and Violence: A Requiem for Modernity*, ed. Ashis Nandy (Tokyo: United Nations University [et al.], 1990), 28; Tiles and Tiles: *An Introduction to Historical Epistemology*, 30f., 40.

[The] goal of natural philosophy is not that of building speculative systems, but acquiring practically applicable understanding of the way the world works.[50]

Thus, Bacon was no longer interested in Plato's Forms and essences. What excited him was rather the discovery of laws in nature, which allowed direct applicability:[51]

What counted as scientific knowledge (*epistêmê*) of nature was for Aristotle knowledge of forms which give us the ability to provide, above all, formal and final explanations of what we observe around us. For Bacon knowledge of forms consisted in a grasp not of ends and capacities of kinds of things, but of the laws of natural action, of how things work and of how to do things, that extend our mastery over the natural world.[52]

Bacon's aim for the improvement of knowledge furthermore implies a relational structure of knowledge, thus attacking Aristotle's aforementioned assertion of the impossibility of wrong perception. Bacon further doubts the immediate (albeit gradual) insight found in the essences of objects in the material world. He rather argues that the essences always remain obscured and have to be excavated gradually:

Bacon insisted that it is not possible to leap in one step from observations to first principles and essences. The essences, or forms, of natural things are not open to view, are not outwardly displayed but, being hidden, must be gradually and methodically revealed.[53]

Bacon thus acknowledges the impact of the individual on the process of perception and cognisance, and disclaims the assertion of self-evident and self-revealing essences. In this respect, he defines four crucial aspects that conceal and obscure the essences – he speaks of "four idols" – as per Bajaj:

Bacon is quite aware that the human understanding, left to itself, does not act as a mechanical engine. Man sees the world in his own image. And this image derives its features *from the nature of the mind in general, from the idiosyncrasies of the individual, from the individual's interaction with others, and from the philosophical*

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50 Tiles and Tiles: *An Introduction to Historical Epistemology*, 40.
51 Ibid., 109; Krohn: *Francis Bacon*, 78.
52 Tiles and Tiles: *An Introduction to Historical Epistemology*, 109.
53 Ibid., 91.

dogmas current at the time. Bacon realized that these aspects of the human condition which intervene between the world and man's understanding of it are important constraints on human knowledge.[54] [Italics added]

Considering the four reasons obscuring the essences, Bacon compares the human mind to a "distorting mirror" which is unable to accurately represent the essences of material objects. He furthermore argues that an entire emancipation of these idols is impossible.[55] Thus, mere observation can never be definitive and certain. Rather, knowledge must always include the possibility that it be revised on the basis of experience. Considering Bacon's refusal of immediate access to knowledge and its inevitable obscuration through the human mind, truth and knowledge experience the reproach of suspicion. Thus, knowledge cannot be acquired definitively, but has to pass through continuous revision. As a consequence, Bacon criticises ancient philosophy and its unquestioned assertion of *a priori* premises, be it in Plato's presumption of the existence of Forms or in Aristotle's philosophy which, according to Bacon, is based on marginal observations that serve as the foundation for his whole system of deduction. Plato's first principles, which structure the cosmos and can be perceived by means of universal reason (νοῦς), are dismissed by Bacon as assumptions which are made prior to experience. They therefore merely pave the way for perception, which consequently excludes them from criticism through observation. This observation is circularly perceived and structured only by such first principles. Bacon thus vehemently argues against such *a priori* presumptions, as Bajaj writes:

> If Bacon's insistence on the unavailability of *a priori* first principles and on using practical success as the mark of truth is pushed rigorously, we would have to acknowledge that whatever conception of the object of knowledge guides inquiry, - whether it be speculative coherence, material well-being or whatever - it too must be regarded as revisable in the light of experience. To treat it otherwise would be to have created another Idol of the Theater.[56]

In his *Novum Organum*, Bacon therefore outlines an approach that takes into account men's inability to immediately acquire exact and final knowledge. Herein he argues that the abstracted results of the induction of particulars must always be recursive. Abstraction has to be deductively probed in particulars and, if necessary, be discarded. Bacon's approach is thus circular, however, without setting the abstract as absolute and while allowing for the option to revise it:

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54 Bajaj: "Francis Bacon," 28.
55 Tiles and Tiles: *An Introduction to Historical Epistemology*, 102, 125.
56 Ibid. 125.

> This method involved collection of particulars through observation and systematic experimentation, […] deriving axioms by certain method and rules from the above particulars, and finally deriving new particulars from these axioms so that the axioms could confirm their own extent and generality. […] observation, induction of axioms from the observed and testing those axioms in further observation.[57]

As a result of acknowledging human subjectivity and fallibility in cognisance, Bacon argues that abstract knowledge cannot be perceived as certain and has to be verified upon the re-examination of particulars.[58] Nonetheless, Bacon utilises this methodology as a means to finally reach certain knowledge by exclusion of wrong hypotheses. Thus, his eliminative induction can reveal the true theory within a finite group of hypotheses:

> One of hypotheses h_1, …, h_i is true; hypotheses h_1, …, h_{i-1} are false; *therefore* hypothesis h_i is true. The capacity of eliminative induction to deliver knowledge of its conclusion depends on our ability to know that the first premise is true, i.e. to know of some suitably limited range of hypotheses, that the true hypothesis is among them.[59]

Thus, Bacon assumes that, despite men's inability to gain immediate access to essences through observation, his methodology provides a procedure of exclusion of wrong hypotheses owed to the obscuring nature of the human mind. Hence, truth is for Bacon not immediately accessible, but his methodology still allows for an exclusive approach excavating truth – based on the premise of a limitation of hypotheses. The assertion of a limited amount of hypotheses permits one to positively define truth and reach to a definitive conclusion.

3.   Multiple Rationalities

In the preceding paragraphs, varying epistemological approaches have been discussed. But irrespective of their different points of departure, the most crucial aspect to crystallise for this study is the premise of a limitation of the system. In this respect, Platonic deduction as well as Aristotelian induction share – despite their contradicting points of departure in the study of cognisance – the limited approach

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57 Bajaj: "Francis Bacon," 30.
58 Krohn: *Francis Bacon*, 92.
59 Alexander Bird: "Inductive Knowledge," in *The Routledge Companion to Epistemology*, ed. Sven Bernecker (London: Routledge, 2011), 281.

of an enclosed system. Further, even while Bacon criticises their universalistic claim for the recognition of essences, he still retains the closed character of the system, as he contends that a limited number of hypotheses culminate in the possibility of excavating the single true one by eliminative induction. The assertion of universality is therefore retained.

Moreover, the central question of the following paragraphs will be the location of Khan's and Shibli's epistemologies. How do they position themselves within these three approaches and in what sense are their critiques of Greek philosophy to be read? As has been discussed before, both propose a rigid dichotomy between science and ancient philosophy. They view ancient Greek philosophy as mere syllogism (*qiyās*) and with suspicion (*zanniyāt*) – keywords criticising the merely deductive character of both Plato's and Aristotle's arguments. On the other hand, Shibli and Khan characterise science by its inductive approach, which emphasises observation or experiment (*mušāhadah*) and experience (*tajribah*). Suspicion is thus contrasted with empiricism. These dichotomous keywords demonstrate Khan's and Shibli's rejection of deduction in favour of induction as a scientific approach. Yet, as has been shown with regard to Bacon, induction does not neglect *a priori* premises *per se*.

3.1 Shibli

Formulating his epistemology, Shibli criticises the assertion of Platonic Forms (*ṣūrat*) as self-contained entities which can be perceived. He further criticises the continuation of this assertion, namely the acknowledgement of the imagining (*taṣavvur*) of former sensory perceptions as a point of departure for knowledge, and disclaims its universal character, as well. This imagining is rather a product of the reason and the human mind (*taʿaqqul*). He consequently perceives general categories (*kulliyāt*) to be a conjunction of remembered perceptions and their commonalities, thus lacking any independence of human imagination and remembrance, as per Plato's Forms:

> General categories [*kulliyāt*] are in this way perceived so that we see several particulars [*juzʾiyāt*], in them we will observe some commonalities – these similarities are no separate entity [*maujūd-i ḫārijī*] [of their own] nor do they conform to any external entity [*maujūd-i ḫārijī*], but [this process] is rather a cognisance [*vajdān*]

which is established in observing several particulars and their mutual commonalities. This cognisance is called *ta'aqqul* and comprises the perception of general categories.[60]

By emphasising that imaginings are merely products of the individual human mind, and possibly obscured by remembrance which is included in the process of conceptualisation, Shibli thus dismisses the claim for the universality of imaginings. In this way, Shibli pinpoints inductive observation as a singularly reliable source. Still, he does not deny a necessity of general categories (*kulliyāt*) for structuring sensory perceptions. But his efforts are directed to the assertion of Platonic Forms as self-contained entities, thus referring to the imaginative character of general categories. In this case, Shibli appears to address Bacon's critique of the Aristotelian approach which proceeds from marginal inductive reasoning with huge deductive syllogisms. Shibli therefore presents induction as the exclusively certain method.

He then proceeds to describe the conceptualisation of those general categories and states that the imagined categories are a product of the repeated perceptions of objects which bear commonalities. This, however, raises the question of how commonalities can be perceived even before the process of conceptualisation has taken place. If categories are denied a prior existence and are perceived as a purely inductive abstraction of particulars, the perception of commonalities (as an essential factor of identification) cannot precede the category itself. Commonalities can rather only be thought of after an unstructured, borderless continuum of material objects has been classified and structured within a limited framework, culminating in the distinction of groups of objects with commonalities among each other and differences with respect to objects outside of the respective group sharing commonalities. This is the case, according Shibli, because a borderless continuum cannot self-evidently reveal commonalities between different objects. This implicates a preceding structuring process. Thus, an external force must be responsible for the pre-structuring of the material objects which makes commonalities appear to be self-revealing. Shibli vehemently rejects any pre-existence of the general categories or Forms which could be remembered or perceived outside of their particulars, or potentially contain the objects of the category, as "these similarities are no separate entity [*maujūd-i ḫārijī*] [of their own] nor do they conform to any external entity [*maujūd-i ḫārijī*]."[61]

Shibli's vigorous emphasis on general categories being derived from particulars inductively suggests that any external force must infuse the recognition of

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60 Nomani: *Maqālāt* (Lakhna'ū), Vol. I, 57.
61 Ibid.

commonalities and, consequently and simultaneously, its demarcation from other categories. Shibli's description of the process of conceptualisation as *taʿaqqul* implies that this process is performed by *ʿaql*, as *taʿaqqul* is a derivate of *ʿaql*. Consequently, *ʿaql* cannot be perceived as an individual faculty, as this faculty infuses the material world with a pre-structuring of categories. But since the categories are, then, a construct of a supra-individual faculty, Shibli perceives the universality of concepts as an individual abstraction through inductive observation. That said, the process of conceptualisation is, in fact, governed by the external faculty *ʿaql* maintaining the pre-structuring and pre-conceptualisation of perception. Consequently, neither perception nor conceptualisation is the creative process of an individual. The individual rather applies an external means of perception.[62]

Thus far, it is not evident, however, what sense of *ʿaql* Shibli employs. It is only obvious that it cannot be conceived of as an individual faculty, but must be of an external character. Is it, consequently, a universal faculty which governs every individual's perception homogeneously? An excerpt of Shibli's *Savāniḥ-i Maulānā Rūm*, a biography of the Sufi mystic Jalāl-ad-Dīn Rūmī (1207-1273) that encompasses an interpretation of his thought, gives a hint in this respect. Here, Shibli first equates *ʿaql* with wisdom (*viždam*) and then further explains:

> *ʿAql* is imbued in every thing like the spirit [*jān*] in the human body. *ʿAql* causes the perception of structure and order [*tartīb va niẓām*] in every part of the cosmos [*silsilah-i kāʾināt*]. In short, the whole universe is one single individual [*šaḥs-i vāḥid*] and the *ʿaql*, which is in this single individual, is God. As man is conceived of as a single individual despite his multiplicity of body parts, likewise is the world conceived of as a single entity despite the apparent multiplicity and as in man there is only one *ʿaql*, likewise there is only one *ʿaql* in the world and this is called God.[63]

Thus, Shibli describes an interpretation of the aforementioned Neoplatonic concept of emanation which perceives the whole universe as a multiplication of God's unity. *ʿAql* is in this interpretation singularised and equalised with God. Shibli describes it as the force imbuing the material world and thus structuring it, while, simultaneously, it is also the faculty making the structure and arrangement of the world perceivable and comprehensible for man. Thus, *ʿaql* is not conceived of as an individual human faculty, but is rather characterised as a universal faculty of perception. This explains the aforementioned pre-structured perception of men

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62 This concealed top-down structure is perhaps already implied with the term *vajdān* in the above given quote, denoting a type of intuition from a Divine source. The term is derived from *vajd* which is a common *terminus technicus* in Sufism, describing a state of ecstasy in the love of God. Thus, Shibli perhaps uses *vajdān* to refer to an immediate, deductively acquired knowledge, independent of induction from the material world.

63 Nomani: *Savāniḥ-i Maulānā Rūm*, 222f.

which presumes implicit categories in recognising commonalities in an apparently borderless continuum. But according to this universalised conception of ʿaql, the continuum must, in fact, be understood as a pre-structured system. Human activity is thus limited to the realisation of this structure governed by ʿaql. Consequently, according to Shibli, wrong conceptualisations cannot occur, as the factor of subjectivity is abolished through detaching the faculty of conceptualisation from the individual and hence universalising perception. The only avenue for human impact is thus the aforementioned abstraction of perception into general categories which can potentially be obscured through erroneous remembrance. The immediate access to the essences of material objects aided by ʿaql, however, remains unaffected.

3.2 Khan

In a similar manner, Khan also initially dismisses the existence of Platonic Forms which can be perceived irrespective of observation or experience. Thus, he distinguishes two types of ideas which appear in the human mind. The first, being a product of merely free-floating reason without any reference to the material world, is perceived as illegitimate as a source for certain knowledge. Instead, Khan emphasises the necessity of a verification of thoughts based on the material world:

> But the ideas of the second kind, that is those which neither our nature produces spontaneously nor are born in us by the [merely] ideal, unauthenticated causes, rather which other authenticated realities (ḥaqāʾiq-i muḥaqqaqah) have brought forth – these are enduring and are "after experience," totally in accordance with fact.[64]

Khan does not, in contrast to Shibli, detail this process of conceptualisation, but restricts his explanations merely to a self-evident perception evoked by an external occurrence. He seems to presume that an occurrence is naturally perceived in its essence:[65]

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64 Troll: *Sayyid Ahmad Khan*, 261 / Khan: *Maqālāt*, Vol. I, 11f.

65 Strikingly, his terminology of *mušāhadah* and *tajribah* seems to hint already at this intuitional insight of an object's essence, for *mušāhadah* is a common *terminus technicus* in Sufism, denoting for example in Suhrawardi's terminology the "'witnessing' of metaphysical truths" (Roxanne D. Marcotte: "Reason (ʿaql) and Direct Intuition (mushāhada) in the Works of Shihāb al-Dīn al-Suhrawardī (d. 587/1191)," in *Reason and Inspiration in Islam: Theology Philosophy and Mysticism in Muslim Thought; Essays in Honour of Hermann Landolt*, ed. Todd Lawson and Hermann Landolt (London: Tauris, 2005), 223). The object is thus perceived by means of a metaphysical power or faculty in its essence.

> Whenever we hear a voice or see smoke we think that over there is someone who produces the voice, or, over there is a fire.[66]

Thus, Khan's approach does not include a process of conceptualisation or structuring of sensory perceptions. They are rather perceived naturally and in their essence. The question of classifying sensory perceptions according to general categories does not arise for him. He instead presents the general categories as self-revealing. Thus, mere observation is perceived as sufficient. The verification of the authenticity of the emerged thought is, furthermore, only directed to the elimination of the first, unauthenticated type of thought and can therefore be described as a mere reassurance. As Troll writes:

> Our thinking is a [mere] idea, yet not of the kind that comes about in our nature spontaneously or which, unauthenticated, merely ideal causes create in us. Rather it is an idea which is brought forth by other authenticated truths. Such an idea of ours is always correct and "after experience," in full accordance with fact, provided we ourselves make not a mistake concerning the thing which brings about in us such an idea.[67]

Even though Khan leaves in the end of the paragraph a gap for error in perception, he does not further elaborate on this. Instead, he emphasises the impossibility of erroneous perception – if of the second kind and "after experience." Thus, the deductive verification of the inductively evoked thought is merely circular, and reassures the effective source of the perception without, however, implying the possibility of an erroneous perception. This possibility would require a revision of Khan's approach, as "such an idea of ours is always correct and 'after experience,' in full accordance with fact."[68] This assertion of immediate access to the essences through universally homogeneous perception suggests that Khan, too, presumes a conceptual pre-structuring which man merely realises through an external, universal faculty – as he does not mention an individual impact in the process of conceptualisation.

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66 Troll: *Sayyid Ahmad Khan*, 261 / Khan: *Maqālāt*, Vol. I, 12.
67 Troll: *Sayyid Ahmad Khan*, 261 / Khan: *Maqālāt*, Vol. I, 12.
68 Troll: *Sayyid Ahmad Khan*, 261 / Khan: *Maqālāt*, Vol. I, 12.

3.3 Metaphysical Signifier

Consequently, both Khan as well as Shibli advocate for the undeniable existence of God on the basis of an enclosed system with the *a priori* premises of a structuring force which simultaneously enables man to perceive this structure. Within their enclosed systems of pre-structured conceptualisations, contingent convictions are presented as necessary insights. As discussed above, both authors refer to Ibn Rushd's conception of the First Unmoved Mover as a self-evident proof of the existence of God. Both argue that the obviously visible arrangement of the world suggests only one conclusion – that someone must have arranged this structure. [New sentence:] As Shibli writes:

> One of the self-evident [*badīhī*] and sensual insights which man […] learns is that when one finds something arranged, structured and organised [*murattab, bā-qāʾidah aur muntaẓam*], then one knows for certain that someone wise has arranged those things. If we find somewhere things in disorder, then it is possible to think of those things that they came together by themselves. But if they are chosen in accordance with such a method and structure [*is tartīb aur salīqe se*] […], then the idea that this arrangement appeared by itself cannot come up.[69]

Khan, in a very similar manner, aims to prove the existence of God with the acknowledgment of a law of nature:

> Their [i.e. the *necarī*s to whom Khan counts himself] proof is as follows: according to the law of nature, that is *qānūn-i fiṭrat* and *aʾīn-i fiṭrat*, all beings in the world […] are found to form one solidly knit chain of cause and effect. Whatever exists is the effect of some cause and this effect itself is the cause of some further effect. This chain of [cause and effect] works exactly in this way and it necessarily ends – according to nature – at a first cause. […] Therefore it is, according to the law of nature, necessary that the final cause of the world should also actually exist and that it should not be the effect of some further cause.[70]

Thus, Khan perceives his concept of *dīn* as the structuring force of the cosmos which maintains universally homogeneous perception and immediate access to the essences of material objects. For, as has been discussed in previous chapters, Khan perceives *dīn* as a synonym of the laws of nature, thus providing a double meaning of *dīn* as the immaterial concept of religion, on the one hand, and world order on the other hand.[71]

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69 Nomani: *al-Kalām*, 36f.
70 Troll: *Sayyid Ahmad Khan*, 334f. / Khan: *Maqālāt*, Vol. III, 303f.
71 Cf. Chapter 6.

Consequently, both Shibli and Khan conclude that religion and the acknowledgement of the existence of God is a natural insight which cannot be denied on any rational basis.[72] These arguments are circular, however, for their lines of argument can only be coherent within an enclosed system as structured by a universal, metaphysical signifier. Only the structuring of the system around this metaphysical signifier – Shibli's theory of *ʿaql* and Khan's *dīn* – sustains their arguments as meaningful, reasonable, and rational. Only the closure of the system maintains the *a priori* premise of a universal structuring force which, consequently, provides the universally homogeneous perception of this structure.

In his article, "The Grip of Ideology," Jason Glynos scrutinises enclosed systems as ideology. He argues against the definition of ideology as a misrepresentation of reality, for this implies, in his opinion, an essentialisation of truth and the possibility of its unequivocal definition positively:

> No longer can the category of ideology be propped up by the traditional dichotomy which pits 'misrecognition' or 'false-consciousness' against a 'true objective knowledge' – a knowledge that can be grasped by means of a seemingly transparent linguistic medium.[73]

In conceiving of truth as an empty signifier, he asserts that any claim for a wholeness of its representation will always be an insufficient and merely a partial claim pretending to represent its wholeness:

> [A]ny signifier that claims to close off this field will never be adequate to the task, and will play the role of an impostor. Ideology describes the situation in which the social subject misrecognizes the lack in the symbolic Other by identifying a particular concrete content with what Laclau calls an empty signifier […].[74]

Thus, Glynos contends for an "impossibility of closure" in the representation of truth.[75] Any representation claiming wholeness, consequently, conceals this impossibility. On this basis, Glynos inverts the definition of ideology as a misrepresentation of an essentialised truth into an attempt at presenting an unambiguously true representation which disguises the fragility of such a representation.

Still, Glynos argues that a complete emptiness or *irrepresentation* of the empty signifier, i.e. complete disorder, is an impossible situation which must be resolved

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72 Nomani: *al-Kalām*, 35, 37; Khan: *Maqālāt*, Vol. IV, 260; Vol. III, 18.

73 Jason Glynos: "The Grip of Ideology: A Lacanian Approach to the Theory of Ideology," *Journal of Political Ideologies* 6, no. 2 (2001): 193.

74 Ibid., 198.

75 Ibid., 195.

by establishing *any* structuring signifier that can provide for the construction of meaning:

> Let us consider the extreme situation of radical disorganization of the social fabric. In such conditions […] people need *an* order, and the actual content of it becomes a secondary consideration. 'Order' as such has no content, because it only exists in the various forms in which it is actually realized, but in a situation of radical disorder 'order' is present as that which is absent; it becomes an empty signifier, as the signifier of that absence.[76]

Since truth is defined as an empty signifier, any claim for imbuing it with any concrete meaning can only be a contingent order culminating from the closure of the system and the determination of the concrete content of the empty signifier. Thus, ideology is the attempt to conceal this contingency and present an alleged wholeness.[77]

3.4 The Structure of Knowledge

With this perspective in mind, both Khan's and Shibli's epistemologies conceal their contingency and claim necessary insights, which, however, are only meaningful within their contingent order. In Shibli's epistemology, his concept of *ʿaql* occupies the empty signifier and claims the wholeness of its representation. From his *ʿaql* emerges the closure of the system through the double binding of the structuring of the world and its perception and conceptualisation, both by means of *ʿaql*. In a similar manner, Khan presents his interpretation of *dīn* as containing a closed world order with eternal and immutable natural laws, whereby perception is limited to the necessary conformity with this order. In his epistemology, essences are immediately accessible – so that erroneous perception is out of question.

Consequently, potential knowledge inevitably circulates around the perception of the structure arranged by the very same faculty which enables its realisation and comprehension: *ʿaql*. For Khan's example, the structure is, however, maintained by the world order of *dīn*, while the role of *ʿaql* is not unequivocally defined. Since both authors presume an accessibility to essences in their epistemologies, any deviation from these natural insights, if thought of as possible, is dismissed either as

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76 Ernesto Laclau: *Emancipation(s)* (London: Verso, 2007), 44.
77 Glynos: "The Grip of Ideology," 198f.

"irrational," or contradictory to ʿ*aql*. Thus, both claim that the acknowledgement of the existence of God is a natural and undeniable fact:

> [I]t is entirely wrong to say that they [i.e. deniers of the existence of God] do not believe in the existence of God. For, this belief is a natural insight of man [*insān kā amr-i ṭibʿī*].[78]

The contingent acknowledgement of the existence of God is thus proposed as a necessary insight within their enclosed systems. A denial is rather perceived as ignorance and reluctance to recognize an undeniable fact.[79] Consequently, knowledge is conceived of as merely limited to the circular movement of the real-isation of the pre-structured perception made comprehensible through a supra-in-dividual faculty, this itself being a part of the world order or, for Shibli, even its originator. Thus, ʿ*aql* cannot be perceived as a critical faculty which questions *a priori* premises through individual reasoning, but must be perceived as the affir-mation of such premises or, in fact, even as their origin.

This results in an inflexible conception of knowledge, for truth is essentialised within their closed systems, implying the assertion of a singular, true knowledge. This suggests that Khan and Shibli employ their emphasis on observation (*mušāhadah*) and experience (*tajribah*) as mere keywords, enabling them to link their epistemologies to the inductive approach of science versus the deductive method of ancient Greek philosophy. However, a closer examination reveals that their epistemologies first apply a simplified interpretation of Greek philosophy. Already, the concise outlining of Plato and Aristotle alone demonstrates that their criticism is merely targeted against Plato and his assertion of self-contained Forms as a source of knowledge in emphasising an inductive approach originating from the sensory perception of material objects. Criticising Plato as a representative strawman for the whole of Greek philosophy, their – in fact – Aristotelian ap-proach is then fashioned as purely inductive and scientific. Science, reduced to the keywords of induction and empiricism, is linked with Islam by emphasising ob-servation (*mušāhadah*) and experience (*tajribah*) time and again. The strawman-critique of Plato allows them to disguise the Aristotelian outlook of their episte-mologies while the influence of Bacon's scepticism of pure induction remains lim-ited to keywords.

One might interpret Shibli's scepticism toward the abstracted general catego-ries possibly obscured during remembrance as an attempt to link his approach to the work of Bacon. However, if Bacon is sceptical of man's ability to immediately

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78 Khan: *Maqālāt*, Vol. III, 18; cf. also Nomani: *al-Kalām*, 36f.
79 Khan: *Maqālāt*, Vol. III, 18.

access essences through observation, Shibli's scepticism of the abstract leaves this immediate access entirely unaffected. Likewise, Khan's assertion of ideas evoked by means of verification through experience does not imply a scepticism with respect to the immediate access to essences. Instead, his assertion appears to serve only as an indicator for distinguishing the two ways of gaining knowledge, while the perception of the essence is presumed to be self-evident *prior* to a subsequent verification.

In fact, both Khan's and Shibli's epistemologies are – despite their vigorous critique of Greek philosophy – very much Aristotelian, as they detach perception and the process of gaining knowledge from the individual by acknowledging an external faculty governing perception and, thus, allow for universally homogeneous conceptualisations within a circularly closed system. Consequently, they neglect the revision of the fundamental, metaphysical signifiers of *dīn* and *ʿaql*, which sustain the structure and meaningfulness of the entire system. *A priori* premises cannot be revised on the basis of *a posteriori* discoveries. Thus, the two authors dismiss a Baconian hypothetico-deductive approach allowing for adjustment of *a priori* premises. For it is not observation and experience which are guiding the construction of the system but, conversely, observation and experience are guided through *dīn* or *ʿaql*. Thus, their approach is rather pseudo-inductive.

Conclusion

The analysis of Khan's and Shibli's epistemologies could reveal several crucial insights about their conceptions of knowledge and reason. The present study originated in an analysis of their assertion of a rigid dichotomy of the epistemological approaches of ancient Greek philosophy and modern science. Both presumed a rather oversimplified definition, each conceiving of Greek philosophy as syllogism and suspicion as a result of its merely deductive approach. This was contrasted to the inductive approach of modern science. In order to link with modern science, both men presented their own epistemological approaches which vehemently emphasised observation and experience or experiment and empiricism as single sources for certain knowledge. This attempt to link with science resulted in an inconsistent terminology: *ʿaql* comes to represent both Greek philosophy's as well as science's approach in, nevertheless, differing notions. While the *ʿaql* of Greek philosophy is criticised for its speculative character, scientific reasoning is

equally related to ʿaql, but perceived as empirical reasoning on the basis of experience (*tajribah*) and observation (*mušāhadah*). As a result of these two divergent notions, an inconsistency and apparent contradiction emerges when Khan criticises the ʿaqlī approach of Greek philosophy and aims to simultaneously substitute it with the ʿaql of science. His criticism is rather directed towards analogy and syllogism versus induction and empiricism. In connection with science, the prior criticised notion of ʿaql is overlaid with a scientific notion of empiricism and induction.[80]

Closer examination disclosed that both Khan's and Shibli's criticism of Greek philosophy is rather targeted against Plato's concept of Forms as self-contained entities being the source for knowledge. Their effort to link with modern science, however, turns out to be a reference to the keywords of observation and experience, indicating an inductive approach. Yet, their strawman critique of Plato as representing the whole of Greek philosophy permitted them to conceal the Aristotelian outlook of their epistemologies.

Despite Khan's and Shibli's emphasis on inductive devices as the sources of knowledge, the process of conceptualisation is, in fact, pre-structured by a supra-individual, universal faculty culminating in uniform perception. This circular perception of a preordained structure cannot be perceived differently due to the connection of the faculty of perception to the very same order. Furthermore, this link to a metaphysical signifier closing the system renders their claim for an inductive approach as mere pseudo-induction, which is deductively governed by an external faculty. The detachment of the perceiving faculty from the individual neglects individual reasoning and inevitably closes the system in an immutable, circular structure. Thus, the possibility of revising the structuring metaphysical signifier is dismissed, as is all perception, despite the authors' claims for inductive abstraction which is, in fact, predestined by the metaphysical signifier. Consequently, the contingency of the system is concealed through discounting any reasoning that conflicts with the metaphysical signifier as "irrational". This closed system further permits the proposal of contingent assertions as necessary insights, most prominently, in the argument for the universality of the acknowledgement of God's existence as an undeniable fact. Thus, both the deductive as well as inductive approaches that Khan and Shibli develop in their writings are governed overtly or

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80 The dichotomy of ʿaql – as in *maʿqūlāt* ("rational" sciences of Greek philosophy and *ʿilm al-kalām*) – in contrast to *manqūlāt* (traditional sciences based on the revealed texts and the *ḥadīṣ*) is turned into a dichotomy of the two notions of ʿaql, i.e. *qiyas* and *ẓanniyāt* vis-à-vis *tajribah* and *mušāhadah*. Scientific ʿaql is tied to nature as its referent, while Greek ʿaql is perceived as "levitating," without a link to the material world. This inconsistency can perhaps be perceived as a result of a thesis of continuity between philosophy and science, resulting in contradictory notions of reason.

covertly by a supra-individual, uniform faculty. For example, as we have seen above, Khan's human nature (*fiṭrat-i insānī*) mirrors God in a universally uniform way, thus asserting an invariable disposition in man to acknowledge God's existence. In a very similar vein, Shibli also develops his conception of *rūḥ* as a faculty of perception through its connection to the Divine World [*ʿālam-i quds*].

In his book, *Another Reason*, Gyan Prakash's description of the impact of science on Hinduism is quite reminiscent of Khan's and Shibli's efforts to link Islam to modern science by proposing a continuity between the two. Prakash states that the gradual spread of science in the middle of the 19th century was accompanied by the attempts of reform movements to rediscover science in one's own religious tradition. However, Prakash argues that this must not be misunderstood as a mere adoption:

> To think of science's authority in India and the modern Indian elite as products of a translation between the lines is to bring another history into view – a history of an irreducibly different Indian modernity forged in the interstitial spaces opened by the process of translation. Viewed as a product of translation, the elite does not appear as a copy of the original, but as a ghostly double that resists identification as a copy by asserting difference.[81]

Instead, he describes science in these contexts as a "grammar of transformation."[82] Thus, the indigenous South Asian confrontation with science triggered a transformation of religious traditions through its deployment as a model.

As we have seen, Khan and Shibli aim to link to science in different ways. While the latter attempted to present science as a continuation of Greek and, in particular, Muslim philosophy, thus implying continuity, Khan equalised Islam and science with Greek philosophy as the connective link. That said, Shibli's project, too, fundamentally bases itself on equalisation, for his assertion of continuity is reasoned on the grounds of the equation of *falsafah-i jadīdah* (modern philosophy) with *ʿulūm-i jadīdah* (modern sciences), thus arranging science in a long tradition dependent on preceding philosophical traditions. Thus, both authors demonstrate a commensurability between Islam and science.

The present study demonstrates that a description of this translational process of equalisation as mere adoption falls short, as science's claim for universality simultaneously resulted in a dislocation of science and its related concepts. Allegedly universal concepts, such as reason, are equated with Arabic/Urdu-terminology in a manner that assumes their synonymy. This disregard for linguistic variation results, on the one hand, in a transformation and reinterpretation of science

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81 Prakash: *Another Reason*, 51.
82 Ibid., 54.

and its structure. On the other hand, this presumed synonymy provides a reference point for the translation of concepts culminating in a transformation and reinterpretation of Islam as well, through its equivocation with a transformed approximation of science (its base concepts now being read with differing notions).

Through the example of the central concepts of science, reason and religion, then, a comparison with their respective counterparts in the discourse of Islam shows tremendous differences. The most prominent example was the equation of reason and *ʿaql*. The latter served, on the one hand, for a circular closure of both Khan's and Shibli's epistemology by detaching it from the individual, thus universalising the process of perception which is comprehended as unequivocally revealing essences. On the basis of this concept of reason as *ʿaql*, contingent claims can be presented as necessary and in conformity with science. Khan's and Shibli's inherent claim of synonymy between *ʿaql* and reason allows them to integrate their Aristotelian epistemology into the discourse of modern science, and hence revert the thesis of conflict between science and religion because religious claims can be argued as rational

This throws some light on the commonly-recurring recurring accusation of the "Westernisation" of Khan and the Aligarh circle in general. As is evident here, their conception of science is rather based on basic keywords allowing to connect with scientific discourse, while the content is a translation of these keywords in an Islamic context. Thus, it is questionable as to how far their representation of Islam can be described as the product of merely "Western" influences.

This question of influence throws some light on the nature of the two counter-concepts of science and religion. The preceding two chapters have already questioned the assertion of fixed touchstones, as Shibli and Khan seem to suggest, referring to either science or Islam as stable entities. The present chapter demonstrated that not only is Islam redefined in confrontation with science, but science itself is exposed to a process of translation and equalisation into an Islamic context, culminating in tremendous epistemological changes. With this in mind, neither religion nor science – as presented in the works of Khan and Shibli – can be reasonably argued as originating in a "Western" context. These authors' conceptions of reason and science, which preceded their responses to the conflict thesis, are affected by the transformative processes outlined above. Thus, no origin can be identified and one rather has to assume various origins of these concepts, which cannot be retraced to a single source.