

On Harmonizing Islam and Science: A Response to Edis and a Self-Criticism
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We must at all costs avoid over-simplification, which one might be tempted to call the occupational disease of philosophers if it were not the occupation. — John Langshaw Austin, *How to Do Things with Words*, 1962

Defining a “New Generation” in Islam and Science

In a paper for *Social Epistemology* (Bigliardi 2013), previously discussed at the American University of Sharjah during the conference *Belief in Dialogue* (21-23 June 2011), I advanced a definition of a “new generation” of authors who discuss the interaction of Islam and science. This paper offered the results attained in an earlier stage of my research. Three main points should be recalled here concerning the discussion offered in those pages.

First Point

First, my discussion drew upon the results found in Leif Stenberg’s monograph *The Islamization of Science* (Stenberg 1996). Stenberg focused on the discussion of Islam and science developed by four rather different authors: the French surgeon Maurice Bucaille (1920– 1998); the Palestinian-American scholar Ismail Raji al-Faruqi (1921–1986); the Persian-American scholar Seyyed Hossein Nasr (b. 1933); and the British-Pakistani scholar Ziauddin Sardar (b. 1951). It is necessary to recall here their respective positions *in nuce*.

Bucaille was a famous representative (even if not the inventor) of the “scientific interpretation” of the Qur’an, an exegetical trend according to which scientific notions can be detected in God’s revelation to the Prophet Muhammad — notions accurately described long before their discovery by humans thus proving, like “scientific miracles”, the Qur’an’s divinity (however, the term “Bucailleism” is usually employed to indicate the *pseudoscience* often associated with this kind of exegesis).

al-Faruqi proposed numerous plans for the “Islamization” of knowledge and science as a way to rejuvenate the Muslim *ummah* or community that, he believed, is poisoned by Western principles. This process was basically a radical reformation of epistemology through Qur’anic concepts and was considered by al-Faruqi as the first step towards a more general Islamization of life.

Nasr is a Traditionalist, or Perennialist; that is, he shares the idea that various religions essentially contain the same metaphysical teaching, or *perennial philosophy*, that reminds human beings of their connection with the Absolute (albeit Islam holds, in his view, a privileged position as the revelation that completes and seals the previous ones). Utterly critical, like other Perennialists, of contemporary (Western) science, Nasr suggested a “scientia sacra” reconciled with the divine through Qur’anic concepts.

Sardar, finally, proposed the correction of science, at least of its guiding principles, through Islam (Stenberg mainly analysed his role in the heterogeneous group of intellectuals known as *Ijmali*, according to whom it was necessary to render science relevant to Muslim culture while simultaneously reforming it according to Islamic principles and concepts).

Stenberg's work proved highly inspirational. His research was based on the analysis of an astonishing amount of empirical material (together with personal interviews with some of the authors at stake) and reconstructed the discourse on Islam and science from an Islamological perspective without being part of it.

Second Point

Second, my definition of a “new generation” was inspired by the observation of the works of six contemporary authors (not analysed by Stenberg) notable for their recent contributions about Islam and science: the Turkish religious leader and author Adnan Oktar (writing with the pseudonym *Harun Yahya* - b. 1956); the Egyptian geologist Zaghoul El-Naggar (b. 1933); the Iranian physicist Mehdi Golshani (b. 1939), the Iraqi physicist Mohammed Basil Altaie (b. 1956), the French astrophysicist Bruno Guiderdoni (b. 1958), and the Algerian astrophysicist Nidhal Guessoum (b. 1960). Similarly to Stenberg, I decided not only to examine their writings, but also to better understand their ideas through one-on-one interviews.

Third Point

Third, my definition of a “new generation” referred to *four* authors: Golshani, Altaie, Guiderdoni, and Guessoum. Oktar/Yahya and El-Naggar were seen as representative of, respectively, “Islamic creationism” and of the “scientific exegesis” of the Qur'an. The definition was articulated in *three points*, each one of which regarded as a necessary, though not sufficient, condition to belong to the “new generation” and distinguishing its representatives from the authors studied by Stenberg: (a) outstanding competence in physics; (b) the idea that science is a field of knowledge with its own methods and internal dynamics that need not be further reshaped; (c) a culturally pluralistic approach — Islam can be reconciled with science *qua* religion and not because it enjoys a privileged harmony with it.

In the final pages of my article, I asked whether a better definition of such authors would be “Muslim harmonizers”. I identified some challenges for them; for example, being more specific about their reconciliation of religious concepts and biological evolution.

Responding to Edis

In his discussion of my 2013 article, Taner Edis (2014) advances three main points:

- 1) A comparison of the “new generation” with most recent trends in Islamic feminism;

- 2) A comparison with Christian theologians; and
- 3) A critical judgement of the “new generation” itself.

As to the first point, Edis writes:

The new generation of harmonizers are also similar to the Islamic feminists in their fundamental conservatism: the reinterpretations they propose are ways to update and preserve familiar conceptions of faith. Old-fashioned secular compatibilists typically assert that science and religion have separate spheres and that religious doctrines should not interfere with science (...) The new generation are not satisfied with such a cheap solution (Edis 2014, 41).

As to the second point, Edis writes:

The new generation, perhaps because of their scientific rather than theological backgrounds, are not Muslim equivalents of those Christian theologians who construct elaborate schemes for compatibility between the present state of science and alleged supernatural realities [...] the new generation is also not like the mostly Christian Intelligent Design (ID) movement that has unsuccessfully attempted to directly challenge the present state of natural science (Edis 2014, 41-42).

As to the third point, Edis writes:

While the new generation is very sympathetic to ideas about divine design that might link up with biology or physical cosmology, they do not commit themselves to concrete claims that can be of use in a scientific context. Their notions of design remain vague, so that they do not risk being clearly wrong. Again, from my perspective, this is not good. We can learn from mistakes, but the new generation is too invested in reinterpretation and hopes that alternatives to mainstream science might somehow be realized. Where explanations are concerned, they offer little of substance to criticize (Edis 2014, 42).

To begin, I must specify that Edis’ discussion of the debate on Islam and science and mine are not entirely placed on the same level. I try to reconstruct the debate from an empirical, non-confessional perspective, aiming at mapping it (or at least I did at the time of my article for *Social Epistemology*, but cf. the following section about Latour). I see myself as more engaged in mapping — describing and comparing rather than criticizing, refuting or taking a stance. The comparisons with other trends or schools of thought also belong to the former kind of reconstruction. In this regard, I find Edis’ comparisons with Islamic feminism and with Christian theologians (at least in his own reconstruction) fitting and enlightening.

Yet, apart from such comparative remarks, Edis does not voice a full-fledged judgment about my reconstruction of a “new generation.” On the one hand, he clearly accepts my definition or label “new generation”. On the other hand, he observes that I do not “say much” about its significance “probably because it is too early to tell” (Edis 2014, 43). I agree with this last remark. Indeed, I tend not to engage in future-telling in academic writing (yet, as early as November 2011, in a private conversation with Salman Hameed we hypothesized the rise of a “next generation” of *theologians* receptive of the teaching of the “new generation” of scientists).

However, Edis is also a *participant* in the debate at least since the publication of his monograph *An Illusion of Harmony* (Edis 2007). He writes from the standpoint of a physicist, he embraces philosophical naturalism — according to which referring to the results of modern physics and biology gives a better explanation of the world — and on such basis he disposes of notions such as God or the immortality of the soul. In Edis’ overall work, the harmony of Islam and science is only one specific critical target in a more general refutation of religion. This position is echoed throughout his entire *Reply*, and clearly stated in the conclusion:

[The “new generation”] may like Islamic feminism, become a tendency that is of more than merely academic interest. For now, though, the ideas of the new generation appears to be only minor features in the landscape of attempts to maintain an illusion of harmony between science and Islam (Edis 2014, 43).

I generally agree with Edis in the sense that at present, like at the time of my earlier article, many details of the supposed harmonization of Islam and science seem in need of further, clearer discussion. Yet, Edis’ specific position is more properly part of the landscape I try to reconstruct (and, as such, it was treated in my 2013 article); thus, I am not willing to take a side here. At least — as to the lack of more detailed theories that I also recognized — I am rather willing to leave to the “new generation” authors the right to reply and further clarify their views and I regard the debate as still open and on-going. I will later add some remarks about such *desiderata*.

Over the years I was carrying out my research, I constantly had a frank and friendly exchange of ideas with Edis and, if I can level a general counter-objection to his *Reply*, it is precisely that he has been too *lenient* towards my very *map* of a “new generation.” This position was perhaps by virtue of his gentle temperament or, perhaps, because embracing the general definition of a “new generation” better serves his own purpose of a wholesale attack on the harmony of Islam and science.

However, in the course of time, I have come to regard the definition itself of a “new generation” as potentially mined by some overgeneralizations and oversimplifications. In the following sections I am willing to offer my reader a thorough self-criticism.

Revising the Definition

My research has developed and the conversations with Oktar, Golshani, Altaie, El-Naggar, Guiderdoni and Guessoum have been edited, collected, and critically discussed

in the monograph *Islam and the Quest for Modern Science* (Bigliardi 2014a). While working on the monograph, I was happy to notice that the label “new generation” was approved of and adopted by at least one authoritative colleague, Salman Hameed (cf. Hameed 2012). Moreover, at least one new author has emerged who seems to fit the definition of a “new generation” — the Jordanian molecular biologist Rana Dajani (b. 1969 – cf. Dajani 2012). Finally, one of my interviewees, Nidhal Guessoum, seemed to agree with my definition (cf. Bigliardi 2014a, 159-162).

However, I felt that my initial definition had to be further refined, I have reformulated it as follows:

- (1) All the authors belonging to the “new generation” are natural scientists who are, or have been, engaged in scientific teaching and/or research at university level.
- (2) The authors at stake recognize that the scientific method cannot be changed and therefore do not advocate any kind of “Islamization” of science.
- (3) The “new generation” is open towards the possibility of theistically interpreting biological evolution.
- (4) The “new generation” distances itself from the “scientific exegesis” of the Qur’an, often deemed unscientific.
- (5) The “new generation” simply accepts that Islam can be in harmony with science *qua* religion or at least on a footing of equality with other monotheistic religions. The older generation considered Islam to be in harmony with science by virtue of a privileged relationship (as the exclusive repository of concepts with which science should be reformed *or* as the only scientifically validated religion).

Each trait can be defined as a necessary and non-sufficient condition for belonging to the “new generation” or, conversely, that not one among Bucaille, al-Faruqi, Nasr and Sardar, entirely possessed.

Further Caveats About the Revised Definition

Such refinement notwithstanding, I see some substantial methodological shortcomings in the elaboration of my definition.

First, it is based on the distinction given the stances of the four authors focused upon by Stenberg. Stenberg’s study is based, in turn, on a selection (for instance it does not take into account the authors belonging to the *Aligarh school* - cf. Bigliardi, forthcoming b). Hence, identifying a “new generation” in the terms I have described depends on successive, artificial restrictions of the authors investigated.

Second, the very identification of a “new generation” runs the risk of artificially overshadowing the extant importance of the theories of the scholars studied by Stenberg. These scholars still have a cultural impact albeit in different ways and on different audiences (it would be particularly interesting to study the development in the views of, respectively, Sardar and Nasr, still very prolific public intellectuals, as well as the contemporary reception of the views of al-Faruqi, especially in the foundation of Islamic universities).

Third, the expression “new generation” seems to be based on a misleading (or at best extrinsic) chronological criterion, and it is devoid of any specific indication as to the actual attitudes of the authors it intends to define.

Fourth, the definition as I have sketched it relies on heterogeneous observations, the initial one being sociological. The remaining observations pertain to theoretical stances.

Fifth, the “new generation”, thus identified, still displays similarities with the overarching traits recognized by Stenberg in the authors he studied. In the case of my interlocutors, one can also remark that they are cosmopolitan intellectuals who did not receive a formal religious education and speak in the name of “Islam,” trying to redefine it and affirm its significance in a world dominated by science.

In addition to these specific shortcomings, it should also be observed that the very identification of a general definition seems to run contrary to the spirit of which I embarked on my investigation of the contemporary debate of Islam and science aimed at representing its richness and complexity; for instance, it induces us to easily dispose of Yahya and El-Naggar. Therefore, after considering communicative and argumentative strategies, recurring themes, on-going discussions, and issues that require further investigation and assessment on part of external observers, I have come to think of my own definition and identification of a “new generation” as rather simplistic. It is perhaps more enlightening to talk about local conceptual shifts that, considered as a whole, give the impression of a change that, in turn, cannot be reduced to a definition or a formula. In other words, I have come to consider my own discussion of a “new generation” as a didactic fiction. I regard it as useful to shed light on the fact that there is an on-going effort, individually carried out by different scholars, to reconsider the relationship of Islam and science on multiple and variously interrelated levels which are different from Traditionalism, from the systematic and exclusive identification of “scientific” notions in the Qur’an, and from the Islamization of knowledge/science *à la* al-Faruqi.

More Complex Than You Think: Islamic Creationism and Bucailleism

At first, Oktar and El-Naggar seemed only to represent a counterpart to the “new generation,” or respectively, “Islamic creationism” and the “scientific exegesis” of the Qur’an (actually with substantial overlaps between their own positions). However, one of the most interesting discoveries I could make upon closer inspection of their works was that they cannot be entirely reduced to these two labels.

On the one hand, Oktar/Yahya (who over the years has started discussing much broader issues than anti-Darwinism, albeit it remains central in his discourse – cf. Ross Solberg 2013) rather than an “Islamic creationist” (a label that can be applied to different authors) might be better described as an author who — consistently with a strategy common in new religious movements creates — in a not scientifically informed audience, the impression of a harmony of Islam and science by not only “scientifically” attacking Darwinism but also, more generally, by virtue of his style and format that mimics scientific popularization (cf. Bigliardi 2014b).

On the other hand, we do not fully understand the appeal of El-Naggar’s production if we simply state that he is a contemporary avatar of Bucaille and Bucailleism. Most notably, in his methodological statements, El-Naggar claims that the best Qur’anic exegetes are Arabic native speakers; he seemingly represents an elitist stance, “more Bucailleist than Bucaille.” The French surgeon and author impressed his Muslim readership as a foreign scientist who validated Islam. Instead, El-Naggar reassures his audience — as an autochthonous preacher who blends Islam and science and jealously defends his authority in both fields — according to criteria that disqualifies Bucaille, himself, as an interpreter of the Qur’an (cf. Bigliardi 2014a, 188-189).

The authors belonging to the “new generation” often voice a criticism of Bucailleism, deemed pseudoscientific. This criticism seems to act for them as an important identity marker. However, when I questioned further, none of the authors denied that the Qur’an does contain descriptions of scientific phenomena, which can and should be appreciated while attentively avoiding pseudoscience and/or far-fetched exegesis of Qur’anic terms. According to the authors a difference exists between a genuine “scientific explanation” of the Qur’an and pseudoscience (this is the *via media* chosen by Guessoum but seemingly shared by the rest of the “new generation” – cf. Guessoum 2008).

Upon reflection, I have come to think that the relationship and interaction of Bucailleism and anti-Bucailleism cannot be taken for granted given both that we want to reason in strictly scholarly terms and the present state of research. At one end, “anti-Bucailleist” authors address readers who already have an understanding of science superior to that upon which Bucailleism relies. At the other end, a Bucailleist reader or author might well put Bucailleism and the “new generation” in the same bag considering them equal expressions of the harmony of Islam and science carried out by “illustrious scientists” precisely by virtue of that unsophisticated outlook. Simultaneously, the same Bucailleist author or reader might well meet the objections regarding pseudo-science while limiting the acknowledgement of pseudo-science to some unfortunate, isolated cases (this was precisely the strategy followed by El-Naggar in our conversation).

It can also be asked whether, and to what extent, Bucailleism (here strictly meant as pseudo-science) competes with science for the allocation of funding from governments, and how the general perception and practice of science proper is affected by such competition in a given society. What is the relation, if any, between Bucailleistic pseudo-science and the lack of interest and competence in science proper lamented by some authors who attack Bucailleism? Is the flourishing of the first a *cause* of the second — an *effect* or a *symptom*? Once again, I feel that the answers to these questions cannot be

simply taken for granted. It can even be hypothesized that Bucailleism might blossom in a scientifically well-developed society as a side effect of its very development and due to the coexistence of scientists and traditional religious authorities. One can imagine that a prominent scientist, who otherwise successfully practises science in her laboratory, engages in the production of booklets dedicated to the scientific exegesis of the Qur'an in her spare time in order to nourish her own religious identity, or to blandish local, traditional religious authorities (from whom she might obtain funding later employed for the practice of science proper!) with such production.

Guessoum often uses the metaphor of “schizophrenia” to indicate the separation of religious and scientific culture but a metaphor is just a metaphor even if it is a good one. The devastating effects of schizophrenia clinically intended are known — yet the compartmentalization of scientific practice might allow a scientist to hold pseudo-scientific notions in a field while being proficient in another. I am, of course, arguing in a paradoxical, provocative vein and I am far from advocating the inexistence of pseudo-science, a concept I myself employ in the analysis of Yahya's work. What I am trying to do is to *avoid trivializing the interaction of pseudo-science and science*. Upon closer scrutiny, the competition of Bucailleism and anti-Bucailleism seems to be a complex match played on multiple levels (individual, social, political, pedagogical) still open to more fine-tuned analysis than the one offered on my own pages.

A Latourian Proposal

My goal while working on the debate on Islam and science was to gather new empirical findings to make extant works understandable to a wider readership, and to formulate a new definition of the authors at stake; hence, the very idea of a “new generation.” However, on at least one occasion I ended up intervening in the debate itself — or at least trying to do so. I was impressed by the discussion of religion and science developed by the French sociologist of science Bruno Latour in his essay “Thou Shalt Not Freeze-Frame” (Latour 2010) and proposed to inject it into the debate.

In nuce, drawing upon concepts advanced in his long scholarship, Latour advances a complex concept of science as concerned with verification. Contrary to what many might think verification, on Latour's interpretation, has nothing to do with proximity or immediacy. Latour points out: “[I]t builds extraordinarily long, complicated, mediated, indirect, and sophisticated paths so as to reach the worlds that are invisible because they are too small, too far, too powerful, too big, too odd, too surprising, too counterintuitive, through concatenations of layered instruments, calculations, and models” (Latour 2010, 111). Therefore, although science is subject to verification (or, in Latour's parlance, “double-click”), such verification has nothing to do with the representation of the close and present and leads rather to the “distant” and “absent” (Latour 2010, 113). Hence, on Latour's interpretation, science is usually associated with a kind of objectivity, the objectivity of what is near and familiar that is in this case a misled and misleading notion.

Latour compares religious talk with love talk. It is, in his interpretation, a kind of transformative talk that wants to redirect the listener's attention to what is near. Not only is it not subject to double-click verification, it precisely wants “to divert it, to break it, to

subvert it, to render it impossible” (Latour 2010, 106). In Latour's interpretation, religious tales cannot be analysed or reduced to verification. Religious tales just can be repeated “utter[ing] again a word that produces in the listener the same effect, namely the one that impregnates with the gift of the renewed presence” (Latour's example is Gabriel's salutation to Mary), whereas the requests for the verification of those very tales “want you to abandon the present time and direct your attention away from the meaning of the venerable story” (Latour 2010, 106–107). Religion, and not science, in Latour's paradoxical interpretation, “should be qualified as being local, objective, visible, mundane, un-miraculous, repetitive, obstinate, and sturdy” (Latour 2010, 111).

Latour contrasts all these ideas with an objectivist and simplified concept of science. Latour is also opposed to the attempts at “mapping” the relationship of religion and science. In his words, the advocates of such models “[...] speak like Camp David diplomats drawing lines on maps of the Israeli and Palestinian territories. They try to settle disputes as if there was one single domain, or – following the terrifying similarity with the Holy Land — as if two equally valid claims had to be established side by side” (Latour 2010, 109).

I formulated a hypothesis. All of the authors I studied, including the Bucailleists, seem to subscribe, predominantly and tacitly, to the kind of objectivism criticized by Latour. Religion (or revelation) and science, in their view, never clash. This point is defended according to different strategies and with different divergences but still, while articulating such an idea, religion and science are more or less implicitly conceived as territories or geometrical planes that sometimes harmoniously overlap; for instance, when talking about the same objective entities (natural phenomena), and sometimes when they just remain separated like good neighbours. In other words, the kind of objectivism and “geographical talk” criticized by Latour seems to be pervasive in the whole debate over Islam and science, and even common to sophisticated and unsophisticated discussions of the relationship of the Qur'an and science.

Most authors tend to implicitly embrace the idea that some Qur'anic passages can be, to use Latour's words, double-clicked, and also that science is concerned with phenomena denoted as what is “near” and “solid” — in the senses rejected by Latour. In this way, the debate apparently rages over *how* the revelation should be double-clicked, or who should best do so, but *not over the very appropriateness of double-clicking*. This kind of implicit setting, in my view, is pervasive and predominant, but not exclusive. Indeed, we also see that the Qur'an and science are occasionally described as in harmony while emphasizing that the former invites the *pursuit* of the latter. This idea might be accentuated while completely abandoning the talk of boundaries and phenomena as tangible facts, in favour of a bold Latourian approach. Or, conversely, the seminal Latourian elements of the discussion should be brought to maturation.

There might be a mismatch between an interpretation of religion in Latour's terms and the way in which religious people commonly understand their own religious beliefs and practices. It is still open to investigation and discussion whether and how an approach *à la* Latour can be consistently and convincingly applied to a religious understanding of religion. Attempts at applying Latour's philosophy to Christian theology are nascent, if

promising (cf. Miller 2013). To my knowledge, a systematic attempt at reading Islamic theological concepts according to such an outlook has yet not been attempted (even if Latour's earlier works admittedly inspired Sardar and the *Ijimalis* — private communication with Sardar, June 2011). However, I complement my hypothesis with a proposal: a Latourian approach has all the potential to project the whole discussion of Islam and science on a completely different level, by-passing never-ending discussions about the degree of literalism to be adopted in interpreting the Qur'an, as well as infinite hair-splitting regarding the “boundaries” of science and religion, including that such an outlook has the advantage of being in harmony with the suggestion that the Qur'an is a book of *guidance* that encourages us to embrace science as a *practice*. Thus, instead of trying to draw subtle lines between proper “scientific exegesis” and pseudoscientific “scientific miracles,” or distinguishing between degrees and areas of competence, one could redefine the very notion of the “natural facts” studied by science and point out that the Qur'an invites the pursuit of science as the dynamic enterprise described by Latour.

Latourian ideas undoubtedly represent a highly sophisticated position, and complexity is always difficult to communicate and to manage. It is reasonable to expect that, in their respective roles as teachers of science and public intellectuals, figures such as Golshani, Altaie, Guiderdoni and Guessoum, will continue contrasting pseudo-science with “localized interventions” to refute specific pseudo-scientific notions, and to communicate the method and object of science in a relatively simple way to a general public. Perhaps, on a more sophisticated and philosophical level, the decisive leap from an “old” to a “new” generation in the debate over Islam and science will not be marked by a thinker who convincingly works out an interpretation for each and every sensitive topic such as evolution, miracles and divine intervention in terms of rules regarding the respect of boundaries; but, rather by a thinker who will have the courage to entirely and consistently subscribe to a non-objectivist, complex conception of religion and science, and reformulate the whole discussion in such terms. However, the aforementioned reconciliation of Latourian concepts and a religious understanding of religion are still to be investigated in depth and I have myself come to reconsider the very originality of Latour's proposal (cf. Bigliardi forthcoming a).

Further Points to be Explored: Guiderdoni's Traditionalism, the Golden Age, and Theistic Evolution

I invite my readers to take the discussion of a “new generation” *cum grano salis*, never losing sight of the individual differences between the authors at stake. I can here point at some further problems emerged regarding the distinctions between the “old” and the “new generation” and those among the authors of the latter.

The first is an interesting problem emerged recently and regarding the figure of Bruno Guiderdoni. When it comes to his affiliation, his biography, and his activities, Guiderdoni apparently is a *Traditionalist* like S. H. Nasr (cf. Sedgwick 2004, 155). However, when it comes to the ideas he states (not only in our conversation, but also in his works I read in order to prepare it — cf. Bigliardi 2014a, 133-150), one has a hard time to recognize stances “against the modern world.” I was puzzled over the reasons of such apparent discrepancy. One answer could be that I asked my questions from the point of view of a

philosopher of science and I therefore did not entirely detect the Traditionalist vein in Guiderdoni's thoughts as an expert might have done (or perhaps Guiderdoni adapted his answers to my profile even if he had the opportunity to explicitly talk about his Traditionalism). Another answer could be that whereas experts of Traditionalism can well describe him as affiliated to it by virtue of his activities and of the influence of Perennialist authors such as René Guénon on his conversion, *de facto* the stances and ideas Guiderdoni disseminates in his works and conferences are those of a representative of the "new generation", i.e. he represents an accommodation of science and Islam rather than a criticism of modernity and/or a plan for a reformation of science through the supposed infusion of Islamic principles. Guiderdoni would thus be what might be called a "soft Traditionalist" (this label's paternity is Mark Sedgwick's – private communication, March 2014) and his "soft Traditionalism" would in its turn coincide with the stances of the "new generation" (for another study of Guiderdoni's ideas more focussed on Sufism cf. Piraino 2015).

At least two other points need to be further explored (or, conversely, there are at least two other points about which the representatives of the "new generation" are supposed and expected to better articulate their own views). One is the interpretation of the harmony of Islam and science in historical perspective — up to what extent (geographically and chronologically) and why, can one argue in favour of the existence of a "Golden Age" of Islam in which science was flourishing throughout the Muslim world (and in contrast with the Western/Christian Middle-Age)? This question has become especially relevant since the narrative regarding the "Golden Age" has started to be popularized on a worldly scale with the *1001 Inventions* touring exhibit, launched in 2006 and focussing on the scientific achievements of the Muslim world between the 8th-13th centuries CE. Such an exhibition was part of a more comprehensive educational project established by the *Foundation for Science, Technology and Civilisation* based in Manchester. *Inter alia*, it was shown at the Science Museum in London, outside the Hagia Sophia Museum in Istanbul, at the Hall of Science in New York, the California Science Center in Los Angeles, the Aramco Cultural Park in Dhahran, Kingdom of Saudi Arabia and the National Geographic Museum in Washington DC, and it was paralleled by extensive publications on paper and the Internet. It also received public support by prestigious figures such as the British Crown Prince Charles and the US Secretary of State, Hillary Clinton. Yet a number of scholars in different disciplines, while recognizing the "good intentions" of such an initiative, have expressed their concern for inaccuracies and mistakes promoted by the exhibit's narrative (cf. Edis and Brentjes 2012). My interlocutors often touched upon history and historical figures in order to strengthen the case for the harmony of Islam and science; it has to be asked whether and how the representatives of the "new generation" will take a critical stance towards popularizations such as *1001 Inventions*, i.e., if their discourse will differentiate also by virtue of an alternative proposal regarding the "Golden Age" narrative, or if it will conform to more popular ones.

As it has already emerged while discussing Edis' criticism, the second point about which more clarity is to be expected are the details of the theistic reconciliation of Qur'anic concepts and biological evolution, towards which all my interlocutors (as well as the aforementioned R. Dajani) are favourably inclined (as I mention in one of the points that

concur to the very definition of “new generation”) but whose specific details, especially as to human evolution, are far from having been accurately explained (cf. also the discussion contained in Howard 2011).

Conclusion: The Reasons for Research

Let me close this self-criticism with some considerations with which I also conclude the *Introduction* to my monograph. My own interest for the debate on Islam and science was born several years ago when, after inquiring about the splitting of the Moon mentioned in Qur’an 54:1, I was told the (Bucailleistic) narrative according to which such splitting would have been an actual event confirmed by NASA astronauts. Since then, I have been investigating the debate in a scholarly, non-confessional yet deeply respectful perspective. I have not only broadened my views (proceeding much further than the initial exposition to Bucailleism, to which the Moon narrative clearly belongs), but I have also sympathetically understood how one can reconcile a religious identity with updated scientific knowledge. I have undertaken the exploration of Islam as a scholar trained in philosophy of science, and I have tried to write the kind of essays that would have quenched my curiosity when I first came across the debate on Islam and science in the hope that other readers might share my interest.

One might define my research as interdisciplinary. Interdisciplinarity is one of the most fashionable academic catchwords of our time. Yet anybody who has embarked on interdisciplinary research will agree that such an approach, similarly with the virtue of honesty according to Juvenal’s verse, *laudatur et alget*: it is praised but left out in the cold. Touching upon issues belonging to different disciplinary fields a researcher is inexorably confronted with the dissatisfaction of those fields’ experts. Moreover, many experts seem to perceive themselves as the academic version of the mythological Fafnir, a dragon guarding a treasure and intimidating anybody who dares approach it. All this results in practical difficulties in finding support in academic institutions. Furthermore, one has to cope with a constant, intimate dissatisfaction: the feeling of solely having scratched the surface of a relevant matter. I had my share of Fafnirs; that is, of difficulties and rejections, yet I have been lucky enough to find academic institutions to support my research. I have also come to accept that my research (or any research) is open and inexhaustible in character.

While working on the debate on Islam and science I regarded myself as an explorer and a mediator. My main ambition is to convey at least an idea of the complexity and diversity of the ideas at stake. My work will achieve its aim if readers have a general survey of the debate, a sense of its scope and a glimpse at its complex conceptual knots and ambitious agenda. I hope the readers will be enticed into reading the work of the authors I study as well as those of other participants in the debate on Islam and science and, ultimately, to join the debate itself either as newcomers or with their specific expertise.

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