A pragmatist approach to the plurality of explanations in International Relations Theory

Graham Allison's account of the Cuban Missile Crisis reconsidered.

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Abstract: One of the main problems scientists –physicists and political scientists alike- face, is the problem of the plurality of explanations. Graham Allison's classic study of the Cuban Missile Crisis is an excellent example of problem-focused research and an intriguing instance of this problem in International Relations Theory. He leaves us with three versions of the events, which raised more questions than Allison could apparently answer: instructions for concerted action or discrimination between his 'conceptual models' remain very sketchy.
This paper aims to show that replacing Allison's use of Hempel's (then fashionable but now rather outdated) covering-law model of explanation with a pragmatist account of explanation offers a way to break the deadlock Allison was faced with. In particular, we will show that a specification of the epistemic interests of the explainer enables us to narrow down the number of available explanations.

1. Introduction

One of the main problems scientists –physicists and political scientists alike- face, is the problem of the plurality of explanations. Graham Allison's classic study of the Cuban Missile Crisis is an excellent example of problem-focused research and an intriguing instance of this problem in International Relations Theory. He leaves us with three versions of the events which raised more questions than Allison could apparently answer: instructions for concerted action or discrimination between his 'conceptual models' remain very sketchy.

This paper shows that replacing Allison's use of Hempel's (then fashionable but now rather outdated) covering-law model of explanation with a pragmatist account of explanation offers a way to break the deadlock Allison was faced with. In particular, we will show that a specification of the epistemic interests of the explainer enable us to narrow down the number

of available explanations. What begins as an abstract philosophical discussion is developed into an illustration of how pragmatist tools can have successful applications for applied research in International Relations Theory: our framework is used to weed out alternative explanations concerning the Cuban Missile Crisis, which easily ranks as one of the most defining and dangerous moments in recent history.

The paper will proceed as follows. In section 2 we introduce Allison's models and outline the problem of the plurality of explanations, both generally and with respect to Allison. Section 3 then introduces a pragmatist account of explanation from which we derive the tools to take on this problem in section 4. We conclude by visualizing our results in section 5.

2. The problem

The three models outlined by Allison's 'Essence of Decision' (EoD 1971, 1999) are the Rational Actor Model (Model I), the Organizational Behaviour Model (Model II) and the Governmental Politics Model (Model III). For each model an explicit theoretical framework is elaborated which is then used to analyse the Cuban Missile Crisis. These diverse explanatory models prompt the question of how to deal with them, i.e. the problem of the plurality of explanations. This section will first briefly introduce Allison's models, followed by an outline of the problem of the plurality of explanations and an account of why Allison's treatment of it is unsatisfactory. The introduced problems will then be tackled in the subsequent sections.

2.1. The models

Model I: Rational Actor Model

Within this model, international relations are made up of the interplay between unitary nation states that act on a rational basis, i.e. they strive for utility maximization. The selected action will be the one that has the best cost-benefit ratio.

> In response to the placement of missiles in Cuba the US picked a blockade rather than an air strike or doing nothing, because that was the rational option, avoiding a quick escalation and leaving the USSR to make the next move.

Model II: Organizational Process Model

This model opens the black box of the unitary state as principal actor. Instead, international relations are seen as the result of the interplay between the myriad of organizations constituting the state. Primary inferences in this model follow the logic of organization instead of the logic of optimization. State output is no longer aimed at one clear goal, but is the common denominator of a whole set of forces, the result of which might well be something none of the organizations had called for. Furthermore, a typical feature of organizations is that they always strive for bigger budgets and that they are cumbersome. Instead of reacting on the basis of present challenges, they act on the basis of standard operating procedures (SOP) that were devised for earlier purposes. Because of this slow response time, organizations have a strong urge to decrease uncertainty. The alternatives open to an organizational actor are severely limited by its repertoire of SOP's.

> After the US had detected the missiles, air strike had long been the most popular option within the "Executive Committee" of senior advisors surrounding president Kennedy. However, the US Air Force strongly opposed the air strike because of the uncertainty associated with it. The Air Force could not

guarantee that it would succeed in destroying all nuclear missiles at once and the SOP's at its disposal did not allow for the "surgical" air strike president Kennedy had in mind, but only for extensive bombing. On the other hand, the US Navy disposed of an SOP for a blockade and could count on considerable strength already present in the field.

Model III: Governmental Politics Model

Allison's third model zeroes in on the actual people that make up states and organizations. The important explanatory concepts include personal power, individual networks, skills of persuasion, charisma and the 'fog of war', referring to people's awareness of their situation to be "cloudy at best" (EoD, p.382). Disagreement, miscommunication and misunderstandings are common occurrences. The idea of coherent and transparent state behaviour is totally abandoned in favour of international relations as a "messy" collage of personal interests, feuds, ambitions, etc.

Because of the failure of the Bay of Pigs invasion, Republicans in the U.S. Congress made Cuban policy into a major issue for the upcoming congressional elections later in 1962. Therefore, Kennedy immediately decided on a strong response rather than a diplomatic one. Although a majority of ExCom initially favored air strikes, those closest to the president - such as his brother and Attorney General, Robert Kennedy, and special counsel Theodore Sorensen - favored the blockade. At the same time, Kennedy got into arguments with proponents of the air strikes, such as Air Force General Curtis LeMay. After the Bay of Pigs fiasco, Kennedy also distrusted the CIA and its advice. This combination of push and pull led to the implication of a blockade.

2.2. The problem of the plurality of explanations

The basic question of this paper is how to deal with the plurality of explanations. When asked 'Why did the U.S. respond with a blockade?' Allison doesn't give us one but three plausible answers. One way to deal with this would be to pick one of the three anwers as the 'right' answer. Another way would be to say the best answer consists of adding the three models up. Yet another way would be the sceptic response that the models cancel each other out. The challenge Allison confronts us with is that we cannot solve this problem by simply referring to issues concerning empirical adequacy, because all three models are constructed from the same body of evidence, i.e. his personal research on the Cuban Missile Crisis. The first option of picking one model as the 'right' one conflicts with Allison's assertion that they are complementary; each model sheds light on something another model doesn't; the second ends up in inconsistency while the third one leaves us in ignorance. Rather than tackling this problem immediately (it is done in section 4), we will first zero in on the way Allison himself looked at the problem of the plurality of explanations and why he failed to come to terms with it.

The set-up of Essence of Decision is motivated by a positive appraisal of diversity of perspectives.

"By addressing central issues of the crisis first from one perspective, then from a second, and finally from a third, these sections not only probe more deeply into the event, uncovering additional insights; they also demonstrate

how alternative conceptual lenses lead one to see, emphasize, and worry about quite different aspects of events like the missile crisis." (EoD, p.x)

His emphasis on pluralism was in turn a reaction to the dominance of (realist) rational expectations theory in the analysis of international relations. The latter had a long history of dominance, but then the Vietnam War –amongst other- came and made scholars suspicious of traditional frameworks and susceptible to alternative ones. This is essentially the move Allison makes at the level of international relations theory: by constructing alternatives to Model I, its hegemony was called into question and an awareness for alternative explanations was created.

> "Most analysts explain (and predict) behavior of national governments in terms of one basic conceptual model, here entitled Rational Actor Model (RAM or Model I). [...] Two alternative models, here labeled an Organizational Behavior Model (Model II) and a Governmental Politics Model (Model III), provide a basis for improved explanations and predictions." (EoD, pp.4-5)
>
> "This study identifies the basic frame of reference used by most people when thinking about foreign affairs. It also outlines two alternative frameworks." (EoD, p.x)

With the first publication of his ideas dating back almost forty years, it can now safely be asserted that his approach turned out to be an influential attack on Model I hegemony. However, with the advent of alternative explanatory frameworks came *the problem of the plurality of explanations*: how to deal with different kinds of explanations, following different logics, putting different emphases, sometimes making incommensurable statements? First, let's see how Allison himself imagined the interplay between his models.

At moments, Allison seems to suggest that different models are tied to different kinds of analysts, e.g.

> "None of the three analysts –Model I: The Rational Actor, Model II: Organizational Behavior, and Model III: Governmental Politics- simply described events." (EoD, p.379)
> "the three case studies offer evidence about the nature of explanations produced by different analysts" (EoD, p.379)
> "in offering his explanation, each analyst emphasizes what he judges relevant and important, and different conceptual lenses lead analysts to different judgments about what is relevant and important." (EoD, p.388)

However, the main message seems to be that every model shows us things that remain hidden in other models (e.g. "Thus the models can be seen as complements to each other." (EoD,

p.392), so the one-model-per-analyst is not desirable. Does this mean analysts *are* now using one model but *should* use several? Or should we instead resign ourselves to the fact that analysts use one model and turn instead to some aggregate level where the benefits of bringing together these different one-model-analysts can be reaped? The only thing Allison leaves us with is the statement that

> "The best analysts of foreign policy manage to weave strands from each of the three conceptual models into their explanations. A number of scholars whom our analytic sections have squeezed into a single box display impressive intuitive powers in blending insights from all three models." (EoD, p.392)

So apparently the models can indeed be combined at the individual level, but as far as the problem of the plurality of explanations is concerned, this statement is utterly vague: good foreign policy analysis is what good foreign policy analysts do. The trick seems to lie in having "impressive intuitive powers" which can then be used to combine the three models. We think Allison should be more explicit here.

The problem of the plurality of explanations does not lie at the level of theories and explanations but at the higher level consisting of questions like: 'what is an explanation?', 'what are the criteria for good explanations?' and 'what is the relation between an explanation and the question it intends to answer?' So to get a grip on this problem, a shift needs to be made from theory to meta-theory. Although Allison pays a lot of attention to theory and the interplay between theory and practice, meta-theoretical issues remain largely implicit. The only time meta-theory is explicitly discussed is hidden away in the very first footnote (EoD, pp.11-12) in which Allison endorses the logic of explanation as proposed by Hempel (1965), according to which an explanation is essentially an argument in which the explananda, consisting of initial conditions (Cn) and at least one law (L), are the premisses and the explanandum is the conclusion. Here is an example Hempel provided himself:

> "A mercury thermometer is rapidly immersed in hot water; there occurs a temporary drop of the mercury column, which is then followed by a swift rise. How is this phenomenon to be explained? The increase in temperature affects at first only the glass tube of the thermometer; it expands and thus provides a larger space for the mercury inside, whose surface therefore drops. As soon as by heat conduction the rise in temperature reaches the mercury, however, the latter expands, and as its coefficient of expansion is considerably larger than that of glass, a rise of the mercury level results. This account consists of statements of two kinds. Those of the first kind indicate certain conditions which are realized prior to, or at the same time as, the phenomenon to be explained; we shall refer to them briefly as antecedent conditions. In our illustration, the antecedent conditions include, among others, the fact that the thermometer consists of a glass tube which is partly filled | with mercury, and that it is immersed into hot water. The statements of the second kind express certain general laws; in our case, these include the law of the thermic expansion of mercury and of glass, and a statement about the small thermic conductivity of glass. The two sets of statements, if adequately and completely formulated explain the phenomenon under consideration: they entail the consequence that the mercury will first drop, then rise. Thus, the event under discussion is explained by subsuming it under general laws, i.e., by showing that it occurred in accordance with those laws, in virtue of the realization of certain specified antecedent conditions." (Hempel & Oppenheim, pp.135-136)

The 1999-edition, co-authored by Philip Zelikow, states in the footnote that Zelikow "does not believe that this paradigm from the philosophy of science carries over into the philosophy

of history." (EoD, pp.11-12) A short discussion follows, consisting of a short bibliography of a number of defenses and critiques of Hempel, but on the whole this does not affect the 1999 edition as compared to the 1971 one.

Apparently without realising it, Allison's study is a convincing case against the very explanatory paradigm it explicitly adheres to. No wonder Allison got stuck on the plurality of explanations, given the crucial contradiction between the level of theory and meta-theory in his work. We propose to resolve this tension by replacing Allison's alleged meta-theoretical view by a view on explanation that was elaborated itself as a meta-theoretical alternative to the Hempelian model of explanation. As such, theory and meta-theory will be synchronised and with it the deadlock problem of the plurality of explanations will disappear. This is particularly relevant for applied research in social science, because we will use Allison's models as a paradigm case of how alternative explanations can be dealt with.

In conclusion, Graham Allison's classic study of the Cuban Missile Crisis leaves us with three versions of the events each cutting a different path through the available evidence. However, instructions for concerted action or discrimination between his 'conceptual models' remain very vague. While successfully thematizing the problem of the plurality of explanations, he failed to overcome it. The aim of this paper is to make a beginning at this daunting task.

3. The tools

Basically, what Allison did in order to get better explanations was to follow the route of adding more structure to the explanandum by opening the black box of the unitary rational state. In true Hempelian fashion, the idea was to be clearer on the explanandum, since we do not explain events, only aspects of events. (cf. Hempel, 1965, pp.421-423) This assumes that explanation is reducible to description and hence a way to get better explanations is to give better descriptions. As philosophy of explanation evolved, this view came under serious attack, for example by Van Fraassen who convincingly argued that good explanations are not the same as good descriptions; "explanatory power is something quite irreducible, a special feature differing in kind from empirical adequacy and strength." (Van Fraassen, 1980, p.154) This leads him to the assertion that "The discussion of explanation went wrong at the very beginning [i.e. Hempel] when explanation was conceived of as a relationship like description: a relation between theory and fact. Really, it is a three-term relation, between theory, fact and context." (Van Fraassen, 1980, p.156) In the same vein, Peter Lipton acknowledges the early focus on description in philosophy of explanation, but goes on to say "More recently, it has been argued that explanation is 'interest relative', and that we can analyse some of this relativity with a contrastive analysis of the phenomenon to be explained." (Lipton, 1990,

p.249) It is these new insights from philosophy of science which we are going to use to get a better grip of the problem of the plurality of explanations than Allison could using the much criticised Hempelian framework. This section will first introduce a pragmatist account of explanation and position it against the background of classical pragmatism. The subsequent section will then apply it to the problem of the plurality of explanations.

3.1. A pragmatist account of explanation

The main thesis of a pragmatist account of explanation is that scientific explanations do not have a fixed explanatory value: their value depends on the kind of question one is willing to answer by the explanation. Suppose that we observe that *x* has property P at time *t*. This observation can give rise to different explanation-seeking questions, even if all questions are assumed to be requests for causal explanations. At least five types of questions must be distinguished, motivated by different epistemic interests:

(E)	**Why does *x* have property P, rather than the expected property P'?**
(I)	**Why does *x* have property P, rather than the ideal property P'?**
(I')	**Why does *x* have property P, while *y* has the ideal property P'?**
(F)	**Is the fact that *x* has property P the predictable consequence of some other events?**
(H)	**Is the fact that *x* has property P causally connected with events we are more familiar with?**

P and P' are mutually exclusive properties. An E-type question compares an actual fact with one that we expected. For instance, we can try to explain why only 61 % of the Belgian population (between the age of 15 and 64) is working in 2006 (according to Eurostat), while we expected 64,4% (the average of the European Union). An I-type question compares an actual fact with an ideal one (one we would like to be the case). For instance, we can try to explain why only 61 % of the Belgian population (between the age of 15 and 65) is working, while the ideal put forward by the European Union is 70%. An I'-type question does basically the same, but a different object in which the ideal situation is realised is used to emphasise that the ideal is not unrealistic.

E-type questions are obviously motivated by surprise: things are otherwise than we expected them to be, and we want to know where our reasoning process failed (which causal factors did we overlook?). Contrastive questions of type (I) and (I') are motivated by a therapeutic or preventive need: they request that we isolate causes which help is to reach an ideal state that is not realised now (therapeutic need) or to prevent the occurrence of similar events in the future (preventive need).

The non-contrastive questions of type (F) also have a practical motivation: the desire to have information which enables us to predict whether and in which circumstances similar events will

occur in the future. H-type questions are motivated by a psychological desire rather than practically motivated.

Let us illustrate this with some examples.[15] As an example of a H-type question, consider a hard-working farmer, John, who is considering introducing new techniques and specialising in cash crops. He wants to stop producing food crops for consumption by himself and his family. He discovers that his wife has spent most of the money he earned by selling cash crops the previous years. He had hidden it in a place he thought safe but his wife found the money. John decides to continue using old techniques and stick to a mix of cash and food crops. This behaviour can be explained as follows:

> John decides to stick to old techniques and to a mix of cash and food crops because:
>
> (a) when he checked the hiding place, most of the money was gone; and
>
> (b) he has an aversion to risk.

In this explanation, the explanandum is subsumed under a stereotype: risk aversion. The explanation works because risk aversion is familiar to everyone. Even extreme risk seekers can understand how people with risk aversion think. And many people might conclude that they would do the same thing in the same circumstances, because they have a similar risk aversion. In other words: the explanation works by enabling empathy.

There are many similar stereotypes that can be used to reduce seemingly strange behaviour to something familiar: academics sometimes violate deadlines for submission because they systematically underestimate the time required to write a paper, people sometimes buy things they do not need because they are misled by a salesman, members of parliament sometimes vote against their own opinions because following the party discipline is more rewarding in the long run.

It is clear that the explanatory power of answers to H-questions depends on whether or not they establish a causal link with a familiar phenomenon. We do not need a high a posteriori probability: it does not matter how probable farmer John's behaviour is given the explanans.

As an example of F-type questions, we use Robert Axelrod's analysis of unofficial truces (Axelrod 1984; discussed in Little 1991, p. 58) as an example. In World War I, there were unofficial truces by military units on both sides: each side continued to fire its weapons but without inflicting much damage. Axelrod explains these truces as rational behaviour based on a strategy of conditional co-operation in a repeated prisoner's dilemma situation (this strategy amounts to: start with co-operation, and keep on co-operating as long as the opponent co-operates). The units were engaged in a trench warfare, which guarantees a relatively stable, clearly identifiable enemy (units are not replaced overnight) whose reactions can be easily observed. The underlying idea is that in different types of warfare (Blitzkrieg, guerrilla) similar truces are impossible because there is no stable enemy.

In this example, a truce is explained as the aggregate result of the behaviour of two units. The behaviour of each unit can be explained as follows:

[15] More examples and details of this framework for understanding the plurality of explanation can be found in earlier publications, e.g. Weber and Van Bouwel (2002), Van Bouwel and Weber (2002), Weber and Van Bouwel (2007), and Van Bouwel and Weber (forthcoming).

Unit *a* fires its arms at *b* without inflicting any damage because:

(a) it observed that *b* fired without inflicting damage the previous day;

(b) unit *a* adopts a conditional co-operation strategy;

(c) unit *a* considers unit *b* to be its relatively stable enemy; and

(d) unit *a* can easily observe the reactions of unit *b*.

Since F-type questions are motivated by a desire to have information which enables us to predict whether and in which circumstances similar events will occur in the future, probability values are important. The explanation is worthless if we do not have a covering law which tells us how probable the explanandum is given the causes mentioned in the explanation. Moreover, high probabilities are valuable, and deductive explanations are the ideal: if we are sure that something undesirable will happen, there can be no doubt that we have to try to do something about it; if we can predict only with, e.g., probability 0.5, decision making is more complicated.

These examples show that scientific explanations do not have a fixed explanatory value.

3.2 The relation with classical pragmatism

In order to clarify the relation between the pragmatic theory of explanation and classical pragmatism, we look at John Dewey's theory of inquiry as developed in *Logic: The Theory of Inquiry* (1938). According to Dewey, scientific research is a kind of practice:

> In other words, the conduct of scientific inquiry, whether physical or mathematical, is a mode of *practice*; the working scientist is a practitioner above all else, and is constantly engaged in making practical judgments: decisions as to what to do and what means to employ in doing it. (1938, p. 161)

Scientific inquiry starts with *doubt* about a *proposition*. This doubt is, in Dewey's view an irritating state of mind which provokes action. However, it is not immediately clear which actions are relevant for removing the doubt. Hence the decisions mentioned above, which are taken after deliberation. The aim of scientific inquiry is *belief* in a proposition. Once we have reached a state of belief, the urge to act in order to remove doubt automatically disappears.

Dewey distinguishes scientific inquiry from *common sense* inquiry. The latter is defined as an inquiry which, if it succeeds, increases the extent to which we enjoy our environment:

> I shall designate the environment in which human beings are directly involved the common sense environment or Aworld,@ and inquiries that take place in making the required adjustments in behavior common sense inquiries.
>
> As is brought out later, the problems that arise in such situations of interaction may be reduced to problems of the use and enjoyment of the objects, activities and products, material or ideological, (or Aideal@) of the worlds in which individuals live. (1938, p. 60)

Typical examples are an inquiry on what to do in case you are confronted with a fire in a building you are in (how will I escape or extinguish the fire?) or in case you are ill (what will I do to get better?).

Belief in a proposition is not something that increases the extent to which we enjoy our environment. So scientific inquiry research is not common sense inquiry. But in Dewey's view there is a genetic and functional relation between the two kind of inquiry. Scientific inquiry is not an aim in itself, it happens because some common sense problems cannot be

solved adequately (this is the genetic relation) en is only meant to improve our ability to solve common sense problems (this is the functional relation):

> The conclusion to be later reached is here anticipated to serve as a guide in following the further discussion. (1) Scientific subject-matter and procedures grow out of the direct problems and methods of common sense, of practical uses and enjoyments, and (2) react into the latter in a way that enormously refines, expands and liberates the contents and the agencies at the disposal of common sense. The separation and opposition of scientific subject-matter to that of common sense, when it is taken to be final, generates those controversial problems of epistemology and metaphysics that still dog the course of philosophy. When scientific subject-matter is seen to bear genetic and functional relation to the subject-matter of commons sense, these problems disappear. Scientific subject-matter is intermediate, not final and complete in itself. (1938, p. 66)

4. Some answers

As already mentioned in 2.2. the challenge of the problem of the plurality of explanations lies in devising a way to combine the fruitful diversity of different models without getting stranded in inconsistency or ignorance. We have broken Allison's deadlock by bringing theory and meta-theory into sync, creating an opening. Now that the tools offered by our pragmatist meta-theory have been introduced, the stage is set for the finale of this paper. The basic idea is that an explanation is essentially an *answer*. This entails that it never stands alone, but always in relation to a question (like someone is never 'a daughter' but 'a daughter of'). A question originates from a context-specific desire or *epistemic interest*. By linking Allisons's models to the explanatory interests they serve, we will show how the models indeed provide good explanations, but not the same kind of explanations. By specifying which models answer which questions, a framework is created to appraise the plurality of explanations without the threat of inconsistency.

For the question 'Why did the USSR put missiles in Cuba', Model I tends to favor the 'missile gap' hypothesis, positioning events within a broad international context of power relations. On the other hand, Model III reveals Krushchev's huge personal emphasis on Berlin and reports him making a strong relation between Berlin and the Cuban missiles. The overall explanation that emerges is that by placing missiles in Cuba, the USSR wanted to close the missile gap *in order to* have more bargaining power as far as the stand-off in Berlin was concerned. Hence, the missile gap is indeed a cause (as pointed out by Model I), but Model III learns that it is only an intermediate cause. What happens here is that different models highlight different places in the same causal chain. Emphasizing different pieces of a causal chain is a matter of relevance. Different explanatory interests will call for different relevance-distributions.

Model II's role lies mostly in getting a view of causal possibilities and constraints. Institutions provide the buttons that can be pushed as the urge for it arrives. Institutional analysis explains why these buttons are available, rather than other buttons. And they explain what happens between the moment the button is pushed and the moment it has brought about what it was intended for. For example, air strike was a possibility to respond to the missiles, but pushing the button would have brought about much collateral damage unintended by those pushing the button; the explanation for the collateral damage would be an institutional one, because the institution failed to have a 'clean air strike'-routine ready. While John killed his wife because she cheated on him, her cheating is merely the final cause. The trigger setting off the bullet is also part of the causal chain (its irrelevance is merely a contextual factor. For imagine John and the lady are actors and a real gun was used in the staging of the scene, secured by

immobilizing the trigger. At that moment, the trigger setting off the bullet becomes the most relevant cause.) Another cause of the wife being killed is that there was *not* a police intervention right before John pulled the trigger (which again might have been relevant if for example the police knew of the incident and was on its way to prevent it from escalating). In the same sense, there *not* having been a routine for surgical air strikes at the time of the Missile Crisis is a cause for the blockade.
The specific relevance distributions that surface in each models can be further analyzed by adding a *contrast-class* to the question they ask. The question 'Why P' thus becomes 'Why P rather than Q'. The difference between the models lies not in the topic of the question they ask, but in the contrast class. The constrastive questions become:

(I) Why did the Soviet Union decide to place offensive missiles in Cuba rather than in another country?
(II) Why did the Soviet Union decide to place offensive missiles in Cuba, rather than deploy other kinds of weaponry?
(III) Why did the Soviet Union decide to place offensive missiles in Cuba, rather than not place offensive missiles (and try to improve its bargaining position in another way).

The different questions that are asked by the different models result in different epistemic interests that are served. Therefore we now proceed by evaluating the respective models in the light of the different epistemic interests we have discerned in section 3.

MODEL I

(F)
Predictions demand a model that makes lawlike statements. For this, the statements must be general and necessary. From Model I it could be inferred for example that whenever there is a missile gap between countries and these countries have a disagreement, the weakest country will have a strong desire to close that gap. This statement is both general enough and gets its necessity from the underlying expected utility calculus which yields an unambiguous solution.

(H)
The coarse-grained, unrealistic nature of Model I is compensated by its ability to bring any situation down to a simple calculus. In this model, Krushchev wondering whether or not to put nuclear missiles in Cuba is in all Model I respects similar to being at a bakery pondering about whether to have just bread or to go for the croissant. As such, rational expectations is the ultimate stereotype and Model I is by far the best option for creating a sense of familiarity, i.e. serving an H-interest.

As for its relation to the E-interest, it can be noted that Model I does a good job at attributing a sense of expectedness to events in a big and complex environments. Thanks to this model, other models can then answer the question 'Why does *x* have property P, rather than the expected property P'?', because often Model I determines what is to be expected. Model I does not serve the E-interest, but it does contribute to the other models' ability to do just that.

(I) Why did the Soviet Union decide to place offensive missiles in Cuba rather than in another country?

Putting emphasis on Cuba puts us on the level of the international environment and calls attention to the balance of power between the particular countries involved. Hence in answering this question, Model I will focus on the desire of the USSR to close the missile gap. As such, this desire creates familiarity and the level of analysis on which it is situated allows for regularities

MODEL II

(E)

When situations have unexpected outcomes, Model II offers tools to make sense of the puzzlement. As the actions emerging from large organizations, can take very strange, unfamiliar forms due to organizational biases, and raise serious doubts concerning the rationality of the organizational process as a whole, this second model allows for an account of why something was judged as unexpected. As such, unexpected events can be explained as outcomes of long and slow processes of organizational struggle, often resulting in actions nobody ever wanted; or the presence of programmes of 'standard operating procedures' which were designed not for the present situation but for some previous circumstance. An example of Model II satisfying the E-interest is the following:

Why did the USSR decide to place offensive missiles in Cuba without camouflaging the nuclear sites during construction, while they did so (only) after U-2 flights pinpointed their locations?

The organizational process model explains this unexpected aspect the best. The implementation of the USSR decision is assigned to organizations that operate by SOPs; as the Soviets never established nuclear missile bases outside of their country at the time, they assigned the tasks to established departments, which in turn followed their own set procedures. The department?s procedures were designed for Soviet, not Cuban, conditions; hence, mistakes were made that allowed the U.S.A to quite easily learn of the program's existence. Such mistakes included Soviet troops forgetting to camouflage and even decorate their barracks with Red Army Stars viewable from above.

(F)

The organizational Model II analysis also does well with the F-question. In a world made up of organizations, it is safe to assume that what will happen at t+1 will be not much different, if at all, from what is already the case at t. In other words, the cumbersome nature of organizations allows for a stable, easily predictable environment and this is serves the F-interest very well.

(II) Why did the Soviet Union decide to place offensive missiles in Cuba, rather than deploy other kinds of weaponry?

The emphasis on the specific missiles that were deployed is an aspect that can best be grasped from an organizational perspective. While Krushchev only ordered to place a couple of nuclear missiles on Cuba and closing the missile gap also required only a limited deployment, existing organizational routines turned the operation into a massive deployment of both nuclear and non-nuclear firepower. "[C]omponents of the Soviet military transformed Krushchev's initial decision to send some nuclear weapons to Cuba into a massive deployment. This included deployment of IRBMs simultaneously with MRBMs, as well as scores of nuclear warheads for coastal defense cruise missiles. [...] These essentially organizational decisions about the cruise missiles could have been the fuse to a thermonuclear war had the Americans actually carried through their planned invasion[.]" (EoD, p.381) As such, this model explains why an unexpected event like the massive military deployment on Cuba makes sense after all and could even have been predicted from the organizational routines of the organizations involved.

MODEL III

(I)

Individuals are mostly embedded within an institutional framework. These institutions tend to have well-defined ideals, e.g. reducing unemployment to a certain level. When these ideals are not met (triggering an I-question), Model III provides good explanations in terms of the people constituting the organization.

On the whole, Model III being the most fine-grained of the three models, it is probably best suited to serve *therapeutic* or *preventive* I-interest. Thanks to its specificity, Model III allows to describe problems in greater detail and also suggests solutions that, due to their particularity, minimize collateral damage. Additionally, due to the human scale on which it operates, the solutions suggested are easier to implement than in other models; it is easier to fire a rotten apple than to change a balance of power.

(H)

Model III has an interpretative approach, calling on the observers to *understand* why a person did something at a certain moment, trying to provoke a sense of ‘if I had been in his shoes, I would have done the same’. As such, Model III rests heavily on an attempt to make a certain situation *familiar*. Thus, the H-interest is served.

(E)

Given that Model III pays a lot of attention to the coalitions and counter-coalitions formed among diverse bureaucratic actors, it can help us to explain how parochial, personal and bureaucratic interests might curtail the national (rationally expected) interest.

(III) Why did the Soviet Union decide to place offensive missiles in Cuba, rather than not place offensive missiles (and try to improve its bargaining position in another way).
This question emphasizes the actual decision of placing the missiles. From Krushchev's perspective, closing the missile gap was only one of the options to increase his bargaining position concerning Berlin. It was not the most rational one, because the situation might have led to total annihilation of both sides. To explain this unexpected action, Model III suggests the path of trying to get a closer understanding of what person Krushchev was and how he looked at the world. Furthermore, Model III emphasizes Krushchev's personal responsibility and suggests that had someone else been in power, the Cuban Missile Crisis might never have happened.

5. Conclusion

Explanations do not have a fixed explanatory value. Hence, what counts as a good explanation in one context might not be a good explanation in another. The range of possible explanations can therefore be reduced by bringing in the concept of context, a path unavailable to a positivist model of explanation in which context is notoriously absent. Section 4 applied this insight to Allison's models. The results are represented in the following diagram:

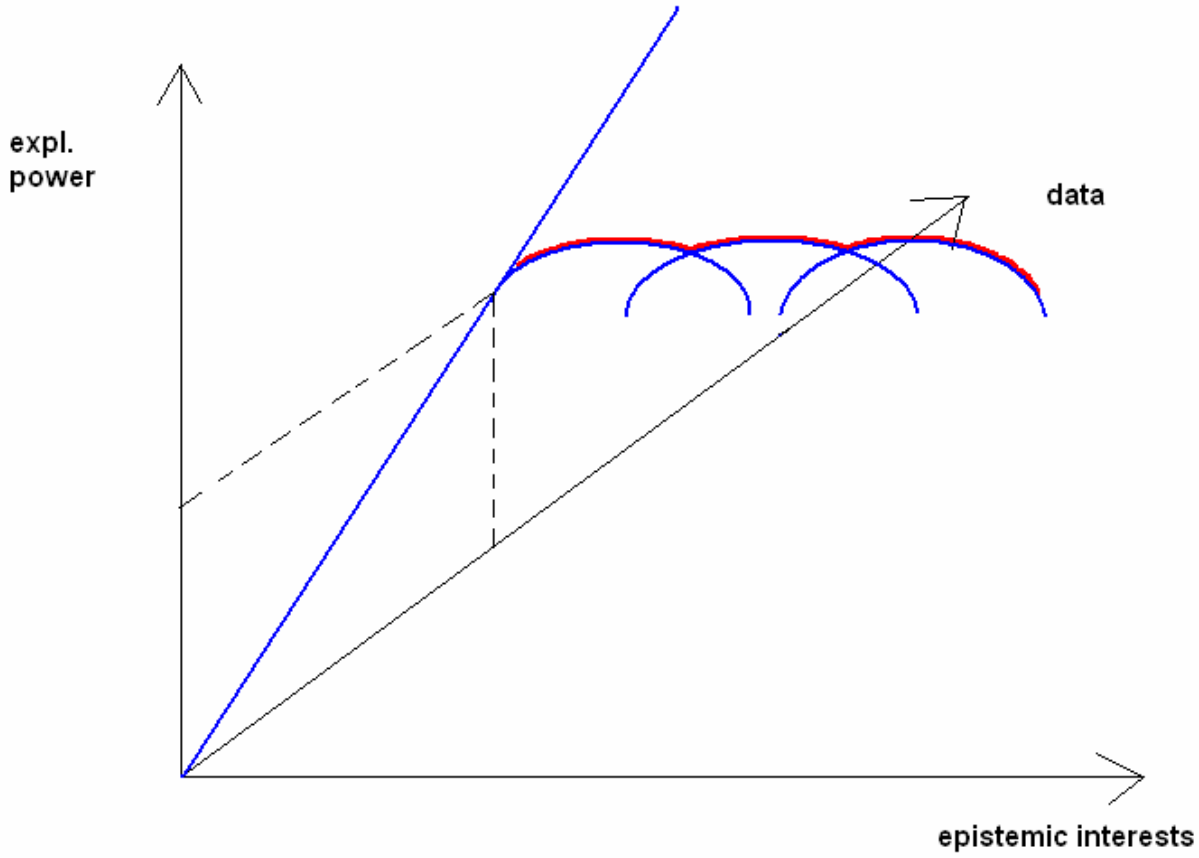
	E	**I**	**F**	**H**
I	-	-	x	x
II	x	-	x	-
III	x	x	-	x

Fig.2: Our analysis reveals the different kinds of explanatory power present in the various models.

None of the three routes that were suggested earlier as possible ways to deal with the problem of the plurality of explanations fits these results: picking one model as the best one is not desirable, because none of the models performs well for all epistemic interests; adding the three models up also fails, because this means using models to satisfy interests they are not suited for; discarding all models is not an option either, because the models do succeed in satisfying some of the interests. How to make sense, then, of the plurality of explanations?

Additional visualization might bring some more insight. Let us represent our findings in a graph. We use three axes with on the X, Y and Z-axis respectively epistemic interests, explanatory power and data. Hempel took explanations to be reducible to description; explanatory power thus becomes a function of data; so to represent his framework we only need the Y- and Z-axis. Allison keeps the data constant as each model is constructed using the same body of evidence. As such each model is represented by one and the same point on the curve. Thus the models are equivalent as far as explanatory power is concerned and no tools for additional discrimination are suggested, which explains Allison's perplexity in the face of the problem of the plurality of explanations. Pragmatism on the other hand treats explanation as something over and above description, hence the additional dimension of epistemic interests is introduced on the X-axis. We found that every model satisfies a different range of

epistemic interests; they have the power to explain, but only relative to a specific set of epistemic interests. So if we let the epistemic interests shift along the X-axis we can expect from our results above that the explanatory power of each of the models will exhibit a convex shape, peaking and receding as the epistemic interests (and their combinations) they best serve come by. Again from the results above we can infer that the models won't peak at the same time, so the models lie next to each other. Furthermore assuming for the sake of simplicity that each model has equal aggregate explanatory power, we obtain a graph displaying the explanatory power of the three models relative to epistemic interests. This kind of graph could be made for any why-question, for example "Why did the U.S. respond to the missile deployment with a blockade?" The full graph we obtain, analysing explanatory power both as a function of data and epistemic interests, is the following:



It becomes strikingly apparent in this graph that bringing epistemic interests to the analysis reveals additional structure in the problem of the plurality of explanations. Having clarified the problem, it is time to take on the issue we deemed most challenging: how to acknowledge the plurality of explanations without running into inconsistency?

We introduced three straightforward solutions which can now easily be evaluated. First, picking a particular model as the 'best' one fails, because as the graph shows none of the three models has the highest explanatory power overall. Choosing, consequently, to allow for indiscriminate diversity by endorsing all three models simultaneously also brings us into trouble due to the overlap of models (a particular problem, visualized by a straight line on the X-axis, cuts through multiple models, triggering inconsistency or –at the least- not resolving our problem of the plurality of explanations). Consequently choosing the option, from *ex falso quodlibet*, to discard all three models leaves us with an overall explanatory power of zero.

The graph, however, suggests a solution which avoids these problems: by systematically choosing the model that best serves the epistemic interests (cf. section 4 for an elaboration of the relation between the models and epistemic interests). Graphically, this is represented by the red line. Within this model, the red line optimizes the problem of the plurality of explanations: diversity is retained, explanatory power is maximized and inconsistency is avoided.

The aim of our paper was manifold. We have introduced a pragmatist account of explanation; we have analysed some of the vagueness Allison left us with and clarified his meta-theoretical presuppositions; we have elaborated on a paradigm case for practitioners to reduce perplexity in the face of the plurality of explanations; our study can also serve as a paradigm case to envision the entanglement of different styles of explanation (rational expectations, organizational/institutionalist, hermeneutic) within philosophy of social science. Furthermore, we hope to have shown that even meta-theoretical issues can contribute to actual applied research. While the theoretical level shows how the bits and pieces from applied research can be brought together (e.g. within one of Allison's conceptual models), the meta-theoretical level shows how these theories in turn can be brought together. May this be a reminder that, although often separated institutionally in different journals, different disciplines and different bodies of expertise, in reality these three are engaged in a continuing dialogue.

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