

# Relevance of Philosophical Approach to Values in Social Science to Maritime Research

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**ABSTRACT:** The origin of maritime research lies in a multi-disciplinary approach. The philosophical grounding for academic research inherently shapes the methodological approach, data collection methods adopted, and analysis techniques deployed. Thus, there is a need for an insight into the philosophical underpinnings of maritime research for better understanding of research design in maritime context. The paper will examine social science and its grounding in philosophical concepts for qualitative research, and the relevance of philosophical approach to 'values' in social science, to maritime research by using qualitative methods. The aim is to apprise the novice maritime researchers - in simplistic language, about the philosophical approach to values, as an alternative to complex descriptions of concepts available in philosophical articles and references.

## 1 INTRODUCTION

The origin of maritime research lies in a multi-disciplinary approach to the sea as a highway and a resource base, though not just as collection of subjects related to the sea [1]. The natural science dimension has been interspersed with social sciences as an integrated approach to subject areas that demand a cohesive examination of a research problem. Further, the philosophical grounding for an academic research inherently shapes the methodological approach, data collection methods adopted, and analysis techniques deployed [2]. Therefore, it is important that the philosophical concepts in social science be studied in relation to their relevance to maritime research. As it is a vast domain, this paper only focuses on the philosophical approach of 'Values' in maritime context.

The study of social sciences as a distinct discipline has developed quite recently compared to the study of natural sciences. The history of social science has been

a long and arduous effort to become aware of the things hidden or taken for granted: things we did not know existed [3]. Social Science or perhaps Social Sciences (because they are multiple and relatively distinct) were only invented in anything resembling their modern form in the mid-1800s, and they only reached their current form in the early 1900s [4].

### 1.1 *Research Question*

The paper is focused on the question - What is the relevance of philosophical approach to 'values' in social science, to maritime research?

### 1.2 *Method*

The overall analytical framework applied for answering the research question is by broadly applying qualitative research strategy. Thus, social science and its grounding in philosophical concepts

for qualitative research will be broadly identified, and subsequently, it will be discussed with a particular reference to 'values', highlighted with examples in maritime context.

## 2 SOCIAL SCIENCE VS NATURAL SCIENCE

The study and research of natural sciences usually followed well-structured and widely accepted principles, theories, concepts related to scientific knowledge and experimental laws & methods. However, the social sciences demanded a flexible approach in designing new theories and methodologies appropriate to the discipline. The natural sciences are different from the social sciences in several respects as the natural sciences are very precise, accurate, deterministic, and independent of the person making the scientific observations, however, the same cannot be said for the social sciences, which tend to be less accurate, deterministic, or unambiguous [5].

Incidentally, the initial attempts to conform to the ideals of natural science research may have influenced the development of the doctrine of positivism. Auguste Comte (1798–1857), founder of the discipline of sociology, attempted to blend rationalism and empiricism in a new doctrine called positivism [5]. Comte believed that the time was right for application of methods that were so successful in astronomy, physics and other natural sciences to the social realm [6]. He defined three methods of philosophizing development of human intelligence, theological - phenomena caused by supernatural things, metaphysical – explanations through abstract forces inherent in human beings and positive – reasoning & observation. Thereafter, he goes on to argue use of positive philosophy for social science research.

Subsequently, Durkheim postulated treating the social facts scientifically as 'things' – which are realities, and must be proved empirically, also accepting that his positivism results from the rationalism [7]. However, he also pointed out that the social facts are not the only things which can be observed and measured. Thus, this approach can be considered slightly different from the positivism of Comte, though both argue use of scientific methods, primarily quantitative, in observation and analysis of a social phenomenon.

However, as the social science developed, limitations of these early doctrines were questioned and accordingly antipositivism and postpositivism were propounded by the philosophers to address them and make more relevant observations of social phenomena.

Geertz provided a different approach in searching for the explanations through not only experiments but also interpretations in probing the meaning [8]. One of the methods of getting the truth is through naturalistic inquiry which primarily relies on field study and is more suited to the socio-behavioural inquiry and evaluation [9]. While the scientific inquiry focuses on general phenomena existing and discoverable in real world, the naturalistic one

identifies multiple realities or interrelations of the multiple truths.

Consequently, social science has been recognized as a significant field of study contributing to the important social and cultural phenomena. Even the initial challenges for the relevance of social science research called for it to be responsive to the pressing issues of the day and play an active role in promoting social change [10]. Hence, it has evolved into an important change enabler in social arena.

At this stage, it is important to bring out the relationship between philosophy and social sciences before examining the philosophical concepts and its relevance.

## 3 PHILOSOPHY AND SOCIAL SCIENCES

Though philosophy and social science are two separate subjects, there is a distinct relationship between the two. There are two basic models of the relationship [11]. In one view, philosophy could arrive at certain knowledge by rational argument. The most fundamental truths about ourselves and the nature of the world we live in, as well as the rules for arriving at such knowledge, could be established by philosophers. In this way, philosophy provided 'foundations' for the research done in the particular scientific specialisms. They further bring out that the alternative view of the relation between philosophy and the sciences is sometimes called the 'underlabourer' view.

On this view, it is accepted that armchair speculation about the nature of the world cannot give us certain or reliable knowledge. Knowledge can come only from practical experience, observation and systematic experimentation. So, the special sciences don't need to wait for philosophers to provide them with foundations, or to tell them what they should think. On the underlabourer view, philosophy should be there to provide help and support to the work of the scientists, as they get on with the job of discovering how nature works.

Incidentally, these two views rightly summarize the link between the philosophy and social science and highlight the significance and necessity of philosophical foundations for a valuable research and study of a social science phenomena.

Further, while discussing the relationship between philosophy and social science, it has been attempted to specify in a general way how philosophy, conceived as the study of the nature of man's understanding of reality, may be expected to illuminate the nature of human interrelations in society [12]. The distinction between the approach and applicability of philosophical concepts to natural sciences vis-a-vis social sciences has also been highlighted. Other scholars focused on the methodologies as an underlying conceptual framework to deliberate on the relationship between philosophy and the social science [13].

However, while enhancing intelligence with digital tools and artifacts, it is said that Philosophy, in its broadest sense, is a systematic and rigorous means

to study, criticize, reconsider, and affect a perceived problem [14]. As such, it is never the answer to a problem or an end to something. Instead, philosophy is a tool for casting a wider net, considering expanded ranges of options, and evaluating consequences against a backdrop of a longer time period or in light of overarching phenomena.

Thus, the philosophy is now considered conceptually much closer and deep rooted in the social sciences research than what was thought by scholars in early years and initial deliberations, whereby, natural sciences was thought to be more rooted in philosophical concepts.

#### 4 'VALUES' IN SOCIAL SCIENCE

As the scientific inquiry of the social phenomena emerged to be recognised as a meaningful science and social science research was widely accepted in the nineteenth century, it was still desired that the methods and logic of natural science need to be adopted or appropriately modified to study the social phenomena and accordingly, the concept of objectivity in social science was articulated [15]. While the ontological issues were related to the real facts, the epistemological issues were related to the 'Values'.

The focus of this paper is limited to the role of values in maritime context as a social science approach. Therefore, the objectivity will not be discussed in detail, though these are interrelated and influence the scientific objectivity per se.

Values are primarily meant to indicate the normative or emotive commitments people hold, which may be tacit or explicit while they can also concern a wide variety of things, from commitments to ethical principles, communal patterns of being, or even to qualities one wants to have in one's knowledge about the world [16].

A more contrasting definition was derived from that given by Kluckhohn (1951) that Values, positive and negative, are (1) elements in the effective definition of the situation of action that designate desirable and undesirable modes, means and ends of action, i.e., normative orientations related in varying ways to cognitive and affective processes; (2) may be explicit or implicit, i.e., given directly in value judgments or inferred from verbal and non-verbal behaviours that involve approval, disapproval, blame, praise, reward, punishment, support and suppression; (3) are persistent through time and manifest directionality, i.e., there is observable consistency of response to recurrent situations; and (4) are interrelated as elements in culturally or individually distinctive patterns or systems, i.e., as differentiated but interdependent parts of a whole [17].

The two distinct kinds of values relate to epistemic or cognitive practices and moral & social life respectively. As the former primarily includes simplicity, explanatory power, theories, etc, these are not considered to have a negative influence on science. However, the later related to freedom, justice, etc. are usually unacceptable to scientists and philosophers as it may corrupt the scientific inquiry.

Epistemic values are thus not a threat to objectivity while moral and political (non-epistemic) values can be potentially upsetting [18]. However, many philosophers have brought out that the character of the cognitive values can be heavily influenced by the social factors and therefore it is questionable how these values can be considered to be more acceptable than the moral values. Thus, the argument does seem to have some basis for evaluation, at least philosophically, if not practically.

Let us now take few examples to demonstrate this in maritime context.

Three different types of epistemic practices, which the United Nations relies on to render maritime piracy knowledge were identified in a research study – Quantification by acting as Centres of Calculating Piracy data, Local Knowledge and Detective Work through Monitoring Groups such as UN Monitoring Group on Somalia, and generation of Network and Diplomatic Knowledge through Special Advisors [19]. Each of these approaches look into the subject area from a different context and lens of examination.

Recognizing that Human-technology interactions have become an important multidisciplinary research topic for shipping, theoretical concepts relative to the dimensions of psychology, sociology and ecology in Human Computer Interaction (HCI) were used in a research study in order to form a deeper understanding instead of traditional epistemic practices in this field [20]. Thus, it examined the topic through the scope of different approaches which were not customary to this field of scientific inquiry.

Therefore, in both these cases, the understanding of the knowledge in a particular research area or topic is explored or approached through new theories & explanatory power and thereby it enriches the scientific inquiry.

However, the hypothetical research, for example, related to promiscuity patterns in seafarers due to their long absence away from home, could influence and pose certain moral and social value judgements, not only by the researcher but also on using the tool for enhancing scientific knowledge. Thus, it may present challenges to the objectivity of the scientific inquiry.

Social sciences cannot tell us anything about how we ought to live and what makes a good society as there is an impassable chasm between the "is" and the "ought", a bright line between "facts" and "values" [21]. It is also highlighted that not only the facts themselves are "value laden", what is less often noticed, however, is that values are "fact laden".

In philosophy, normative rules cannot be formally derived from facts. Hence, there is no precise definition for the connotations of ethical behaviour, a term belonging to the realm of normative rules [22]. The moral (prescriptive) judgements were contrasted with factual (descriptive) judgments, leading to the conclusion that the former, unlike the latter, are not rationally supportable.

Weber also states that Hume found that there seems to be a significant difference between descriptive statements (about what is) and prescriptive or normative statements (about what

ought to be), and that it is not obvious how one can coherently move from the descriptive statements to the prescriptive ones. Hume put forward the “is-ought” problem (Hume’s Law), negating the possibility of logically deriving what ought to be from what is. Thus, to be objective, it should only focus on and describe facts & not values.

The arguments appropriately highlight the basic premise and the origin of the well-argued debate about the fact-value dichotomy, which has been the focus of many scholars. This also brings out that values play quite a contrasting part in providing the scientific basis of objectivity to social science research. If we do not see that facts and values are deeply entangled, we shall misunderstand the nature of fact as badly as logical positivists misunderstood the nature of value [23].

However, science cannot be completely “value free” and completely value free science is an illusion [24]. Though the value commitments of a person and his interests shape and inform the practices of science in many ways, however, these may not influence the value-ladenness of scientific knowledge itself. In fact, the influence of values upon social science is not necessarily undesirable and the only illegitimate values are those which lead to spurious findings and conclusions [25].

In science relevant to public policy, the normative argument that values are required for good reasoning in science and values play a crucial decision-making role in science, holds merit [26]. Both epistemic and non-epistemic values play a crucial role in the choice of subject, methodology, interpretation, etc.

Incidentally, Max Weber, the renowned philosopher, could be considered the originator of the idea of the value freedom in social science, where he wrote extensively on the subject. To summarize his views, values play a role in the definition of a problem for study, but these values need not and should not affect the process of investigation itself [27].

## 5 ROLE OF VALUES

As we have discussed in previous paragraphs, science cannot be totally value free and not all values have negative influence on the scientific inquiry, especially in the context of social science. Hence, the values play an important role in many ways, which may be subtle, inherent or inevitable but not always corrupting the conclusions of the scientific inquiry. Whether it is made explicit or not, every research design contains a set of values about its ontology, epistemology, methodology, and axiology, and reflects a particular worldview or paradigm [28].

There are three kinds of roles of the values in social science [16]. These are directive, inferential and linguistic roles. In simple words, the first relates to the role of values in the direction and selection of research, which means the decision about which research to do. The second relates to the role of values with respect to inference in science, the decision about what to infer from the evidence. The third relates to the role of values with respect to the language in

science, and the way in which values influence the words we use to describe things. To understand these three roles of values, let us discuss them in detail.

### 5.1 Directive Role

Quoting John Heron’s (1996) Cooperative Inquiry Research into the Human Condition, it is argued that values are the directorial motive of all people’s actions [28]. Interestingly, this research argues that values as a guiding tool will be the standards against which we make our judgements and choose what is important to us; and to meet our needs and preference. This is what sums up the directive role of values, which influences the choice of the researcher about the direction of the research.

The values play a role in decisions concerning significance in scientific research and values can enter into the core of scientific inquiry and contribute to the scientific knowledge [29]. Thus, the values could be considered to be legitimizing the very concept and existence of science in broader sense. However, it is considerably difficult or challenging to decide what is the overall value of this scientific knowledge.

Values invariably influence how we select and define the problems we investigate. Weber is alluding to the fact that, because our perceptions, thoughts, and acts as human beings are largely founded on values, our choices as social researchers effectively are framed by evaluative criteria [30].

Thus, values play a selective role in deciding which subject or area is interesting to the researcher, sometimes based on its aesthetic value, moral value or a personal epistemic value or a combination of these values as these kind of values shape and direct the attention of the researcher to a particular problem on which the research is founded [16].

However, it again poses an interesting inescapable dilemma or predicament about which values will influence or prioritize over others while the researcher decides which questions to research. Further, while discussing role of values, it refers to a normative notion that characterizes the way things should be done, which will differ among different social groups and contexts [31]. Therefore, it is also challenging to decide which context or whose values will be appropriate in deciding the research questions without corrupting the objectivity of the research.

For example, if we look into the research study which examines the effects of national culture and leadership style on safety performance in bulk shipping companies [32], it obvious what the researcher’s interest are. Apart from recognition of multiculturalism in an international industry such as shipping, which calls for studying impact of nationalities of seafarers as a variable, they also state, ‘...relatively few research have been done to examine the national culture in shipping and how these national cultural differences influence on seafarers safety behaviours’. Thus, innovative and novel areas of research also provide a direction or motive to the researchers.

In certain situations, the values themselves could be the subject of research or may be the normative

end-result of a research thus influencing the question being researched, the methodology being adopted or the interpretations/conclusions. This topical role of the values calls for overcoming challenges on deciding the degree of responsibility of the researcher in helping find means to the given ends.

In a research studying the cultivation of values of maritime college students' occupational pride, interestingly, in the research background, the author distinctly states '...Maritime college students .... have grown into senior specialized talents in the national shipping industry....the core values of their values are weakened and their occupational pride is not strong enough, and so should be paid more attention to' [33]. This amply brings forth the value influence in formulating the research question, the questionnaire used and method for data analyses.

Another important directive role usually related to moral and ethical values is to place restrictions on how the research is conducted and how the data is handled, especially concerning human subjects, privacy, informed consent [16]. Conducting particular research which uses methods that are disturbing or creates psychological/physical distress demands it to be weighed in terms of the benefits or values of the results or scientific knowledge provided such research. Further, to what extent these values shall constrain the topic or the methodology or the overall research design is a difficult proposition to decide as a pure and neutral scientist.

In a study highlighting the unique challenges and difficulties of maritime security research on piracy, terrorism or illegal fishing, seeking in-depth insights through sources not widely available, such as information from parties involved in or affected by illegal activities, the author recommends that fieldwork is still crucial as it adds valuable insights into maritime issues that cannot be gained from published sources [34].

Further, in a study examining the mental health of seafarers, the issue of distress while using the statistical data is evident by the statement of author '...in describing seafarers' mental health, the use of rates to cite trends in suicides by seafarers was not employed' [35]. It is also significant that information on the causes of depression and suicide was also obtained from the so-called 'grey' literature on the health and welfare of seafarers and anecdotal reports from individuals closely aligned with seafarers and their needs (e.g., chaplains in seafarers' centres), apart from the published studies or reports. Therefore, examining the sensitive issue of suicides does pose this dilemma.

It is also observed that the sensitive issue of drug abuse by seafarers has not been widely researched by general maritime researchers and usually undertaken by industry organizations or international regulatory organizations in the form of reports, guidance, manual and statistics. Though, sometimes, it forms part of a larger study on stress and psychological well-being studies of seafarers or medico-legal aspects.

## 5.2 *Inferential Role*

In inferential roles, deciding the methodology to produce or influence a particular reasoning or result may compromise the value to knowledge itself from such scientific inquiry and creates an illegitimate role of values. Thus, it is illegitimate for non-epistemic values to drive inquiry to a predetermined conclusion [36]. It is legitimate for non-epistemic values to play an indirect role in scientific reasoning, while it is illegitimate for them to play a direct one [37].

Another aspect is the values determining in a subtle way the interpretation of the evidence or deciding what to make of the evidence obtained in particular research, especially if the evidence is inconclusive or inconsistent. As this is usually a case in most of the research, it can be legitimately acceptable if the uncertainty is avoided by a claim following deductively from the evidence [16].

In maritime context, in a particular case, it could be more apparent where document analysis is used by utilizing documents for theorizing or interpreting in a totally different way than the original intention of the document. For example, the data analysed from safety reports which were just compiled to document the safety activities in an organization could be misinterpreted to claim certain aspects related to missing information, which was originally not intended to be part of the report.

However, in deciding whether the evidence is sufficient to support the claim in the face of uncertainty, a researcher is using his value judgement too. In such a case, it is necessary to assess what are the implications of making an incorrect choice or judgement. It may result in accepting a false hypothesis or rejecting a true hypothesis. So, it is for the researcher to decide which of these two outcomes is more acceptable, which again will be based on or influenced by his value judgement.

A classic case to demonstrate this in maritime context, though not from academic literature but from operational practices, was experienced during COVID pandemic, when remote audits and surveys were undertaken to obviate the difficulties of conducting the in-person or physical ones, due to travel restrictions, social distancing and quarantine requirements. However, the primary principle adopted was that objective of remote audits is to achieve the same results as obtained with regular audits. This was a difficult proposition as it provided subjective interpretation of the equivalence of outcome of audit by the auditor or maritime authority conducting the audit in the absence of any agreed guidelines. However, it was necessary to continue to take a call on this as there was no option available to ensure continuation of maritime transport. Incidentally, these difficulties have been recognized by IMO and now it is working to develop guidance on this issue [38].

Thus, these roles played by the values are legitimate and cannot be avoided completely, even if the values may have been developed or influenced by researcher's own scientific knowledge of a particular field of research. Further, it is important to ensure that these values do not play a direct role to corrupt, distort or twist the inference drawn from the evidence

of a research. Otherwise, it may be detrimental to the value of the scientific knowledge or the science itself.

### 5.3 Linguistic Role

The values also play linguistic roles in which the language used by the researcher in terminologies defined/used during the study, framing of the research questions, writing or recording of the evidence, scripting the arguments for conclusions/interpretations and sometimes inventing new terminology is influenced by his value judgements.

As Audrey Azoulay, Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO), said on the occasion of International Mother Language Day in February 2018 that "A language is far more than a means of communication; it is the very condition of our humanity. Our values, our beliefs and our identity are embedded within it" [39].

So, it is evident that value judgements and moral judgements play a role in shaping our language and the characterization of empirical phenomena in social science, though value laden language is not unique only to social sciences [16]. Three specific linguistic roles of values have been highlighted. While use of a specific term by intending to enlarge its scope may sometimes obscure or corrupt the phenomena described by the term itself, it may sometimes on the other hand, also bring forth further insights into the phenomena by illuminating or revealing totally new aspects thus enriching it in a true linguistic sense.

For example, the term 'maritime crime' is used by various researchers selectively to include or exclude certain specific type of crimes relevant to their own studies such as terrorism, piracy, illegal fishing, smuggling, drug trafficking, human trafficking, etc. Though the formal definition of the term may describe it more comprehensively. While examining interstate hostility and maritime crime from southeast Asia in a recent study, the authors explain in research background that pirates, smugglers, and illegal fishers can use the contested border zones as sanctuaries, however, they use statistical data related to only piracy and armed robbery in the research for their hypothesis [40].

Interestingly, in another study about unexpected consequences of the COVID-19 pandemic on maritime crime, the same authors clearly state that 'present study evaluates the effects of COVID-19 on maritime pirate attacks in two countries, Nigeria, located in the Gulf of Guinea, and Indonesia, located in the Indo-Pacific'[41]. This demonstrates the concept of linguistic role of values as the intention and understanding of authors is to consider piracy as a significant contributor or major impactor in maritime crime, which they repeatedly use in their research studies and is obviously correct in the context of these two articles.

Further, in designing, creating, interpreting and using a particular term in research context, the underlying value judgement sometimes may play a role whereby the classification of data, situational observations and behaviours could be skewed due to perceived value judgement of the researcher. It also

needs to be considered whose value judgement would be respected, the researcher himself or the subjects or units of research (if humans or otherwise) or social norms or society. As this may influence the evidence and interpretation or conclusions thereby influencing the final outcome of the scientific inquiry, it needs a careful consideration.

The research related to topics about 'Open registries' could be a relevant example in this case. The subject offers contrasting challenges now as a lot of traditional countries have also opened their own international registries, which have lower regulatory compliance and financial incentives than the normal registries. Therefore, it will be a researcher's dilemma whether to consider these international registries at par with open registries or not.

In a study about European response to open registries, the authors use the term open registries with the term 'flag of convenience' for countries such as Panama, Liberia, etc. while they use the term 'offshore and international ship registries' for the traditional countries new registries [42]. Though it is obvious that the two cannot be equated in most of the aspects, however, in some cases, they could be classified together, such as studying governance or regulatory compliance, etc.

Thus, the importance of the values is obvious, especially in social science research and legitimate roles of the values need to be recognised so that objectivity in research is ensured in true sense. Knowledge about various kinds of roles played by values will ensure that a researcher is comprehensively prepared to recognize their influence on objectivity and thus appropriately caters for it.

## 6 CONCLUSION

Values are something which are elementary and essential beliefs that guides and motivates our actions and attitudes. In the context of philosophy of social science, it is considered an essential element in terms of ensuring objectivity in the research. However, total value free research is an ideal which does not exist and is not even desirable in true sense, even if some scholars still want that criteria for social science. The roles of values are inherent in not only shaping the existence of the research or the scientific knowledge and science but also acting as an influencer in designing research.

It shall be the intention of any researcher that the non-epistemic values be not allowed to corrupt or influence the interpretations and conclusions of the scientific inquiry. Further, the influence of the epistemic values be recognised and consciously factored so that this plays only a legitimate role and not an illegitimate one.

The values play three types of roles – directive, inferential and linguistic. The directive roles determine what to research or which subject is chosen by the researcher based on which values influence the selection of research questions, the methodology employed during research and how he considers it

will contribute to the scientific knowledge. The inferential roles of values on the other hand highlights the risk where the researcher may falsify or fudges or deliberately creates evidence to influence the outcome of the research and thereby undermines the value of the scientific knowledge and the science itself. However, it does have a legitimate inferential role where it needs to be determined how and what to interpret of the uncertain or inconsistent evidence of a particular research though, most importantly, keeping in mind the implications if a false hypothesis is accepted and a true hypothesis is rejected.

An important aspect of the values playing a linguistic role brings out that language is embedded with our values, moral judgement and beliefs and therefore sometimes depicts or demonstrates inherent value laden statements. It can not only obscure a phenomenon by intentionally or unintentionally enlarging the scope or use of a particular terminology thereby corrupting the scientific inquiry but also help in illuminating a phenomena by revealing significant aspects which enrich the scientific knowledge by bringing into focus even newer conclusions or interpretations. Finally, the underlying value judgement may also influence the use of the terms in their meaning which conveys a particular interpretation presupposed even prior to the research without providing an opportunity for a contrasting viewpoint.

Thus, the value free ideal, especially for social science could be considered a myth as the concept that social science is value laden as compared to natural sciences, which is supposedly more empirical, has been discounted by many scholars over a period of time.

It is evident that these nuances of values in social sciences are highly relevant in maritime research and conform well to the philosophical underpinnings in qualitative approach. Further, the knowledge and understanding about aspects and roles of values also enriches the discourse and scientific inquiry in the multi-disciplinary field of maritime research.

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