

# RESOLVING INFRASTRUCTURE-RELATED CONSTRUCTION DISPUTES IN DEVELOPING COUNTRIES: THE GHANA EXPERIENCE

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The last three decades have witnessed increased investment in infrastructure projects and construction activities in developing countries. Unfortunately, disputes often arise from such projects in developing countries that are resolved by arbitral tribunals in the developed world. Whilst similar projects in the developed world also suffer from the problem of costly disputes, there is a growing trend of resolving them by less costly ADR methods. Available literature on infrastructure-related construction dispute resolution in developing countries provide inadequate information on how such disputes are resolved in practice. The qualitative study, which formed part of a larger study on infrastructure-related construction dispute resolution in developing countries, critically examined construction dispute resolution experiences of Ghana as a typical example of practice in developing countries. The aim was to identify problems with the extant dispute resolution process and explore possible improvements. Ghana was used as a holistic case study. The study relied on interview data. Semi-structured interviews were conducted with forty-five top management employees of five Government Ministries and six public institutions regularly involved in major construction projects. Additionally, eleven individuals from foreign construction firms and adjunct organisations were also interviewed. Data collected were analysed using grounded theory-related analytical methods such as coding, memoing and diagramming to develop themes and patterns from the data. It was found that high dispute resolution cost, low satisfaction with outcomes and suspicious relationships characterised the extant dispute resolution process. An attempt is made to proffer ways to address the challenges identified. The research will enhance foreign contractors' understanding of dispute resolution practices in developing countries and contribute to research by adding to the limited literature on the subject.

Keywords: developing countries, dispute resolution, infrastructure development, Ghana.

## INTRODUCTION

The past three decades have witnessed burgeoning research on the relationship between economic growth and infrastructure development. Research conducted in Sub-Saharan Africa (Forster and Briceno-Garmendia 2010; Osotimehin *et al.* 2010), East Asia (ADB *et al.* 2005), and Latin America (Andres *et al.* 2008) have all established a positive correlation between infrastructure development and economic growth. Briceno-Garmendia *et al.* (2004) found that reliable and affordable infrastructure can reduce poverty and thus help achieve the Millennium Development Goals. Using a regression framework, Calderon and Servén (2010) conducted an empirical assessment of the impact of infrastructure development on growth in Latin America

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and found that there is a growth cost to the infrastructure gap in the region. Reviewing other studies on the relationship between infrastructure development and growth, the authors concluded that infrastructure development had the potential to promote growth and equity under the right conditions. Consequently, it is not surprising that States and Multilateral Development Banks (MDBs) are investing more resources in infrastructure development in developing countries across the globe (World Bank 1994; UNCTAD 2008).

With increased construction activities, disputes have been inescapable. The perception is that many of such disputes arising out of infrastructure projects in developing countries are resolved by arbitral tribunals in Europe mainly as a result of lack of efficient framework for dispute resolution and the absence of relevant knowledge, infrastructure and expertise (Mante, 2014). Available literature on construction-related dispute resolution in developing countries, especially those in Africa, provides inadequate information on the existing framework for construction dispute resolution. Public infrastructure development is essentially the preserve of States and is often undertaken by foreign construction firms (UNCTAD, 2008). Consequently, the main parties to construction disputes, the kind this study focuses on, are the State and foreign consultants and contractors. The study aims to identify what framework exists for construction dispute resolution in the context of major infrastructure projects involving the State. Using existing literature, a conceptual model for construction dispute resolution was developed to guide the study. The next section examines this framework. This is followed by an outline of the research approach and a discussion of the outcome of the research.

## **FRAMEWORK FOR CONSTRUCTION DISPUTE RESOLUTION**

Two observations on construction dispute resolution stood out in the relevant literature. Firstly, the process covers a broad perspective embracing the determination of rights and obligations of parties as well as dispute avoidance, reduction, control and management. Secondly, the techniques employed to achieve the above goals are often ordered on a continuum ranging from techniques supporting cooperation between parties to those authorizing third party intervention. The continuum also depicts levels of control that parties and or third party neutrals have over the resolution process at different stages. Powers transferred to third party neutrals may be facilitative and/ non-binding (as in mediation) or binding (as in arbitration or expert determination). Fenn *et al's* (1997) taxonomy for conflict and dispute resolution illustrates the first observation – it categorizes dispute handling processes in construction into conflict management and dispute resolution processes. Dispute review boards, negotiations, quality matters and procurement systems are all classified as conflict management strategies. Dispute resolution is categorized into binding and non-binding. However, it is worth noting that the focus of their research was (in part) to provide taxonomy of dispute mechanisms not a framework reflecting how these mechanisms are applied.

The second observation is typified by Cheung's (1999) framework for dispute resolution - this goes beyond providing taxonomy of dispute processes. Following Groton's (1992) stair-step chart, the various resolution mechanisms commonly used in the construction industry are set on a continuum and indication given as to the stages where respective processes are used (Cheung, 1999). He categorizes the process into dispute prevention (where the emphasis is on equitable risk management and cooperation) and resolution. At the base of the stair are the prevention processes. As disputes escalate, they are moved on to the resolution phase which begins with

negotiations. Cheung (1999) divided the dispute resolution phase into four stages namely standing neutrals (dispute review boards, dispute resolution adviser etc.), non-binding processes (mediation, mini-trial and adjudication), binding mechanisms (arbitration) and litigation. In his view, the four categories of mechanisms follow each other lineally along the stair-step. This may not always be the case in practice as parties may choose to mediate even whilst litigating.

Nevertheless, Cheung's (1999) framework broadly reflects the views of many experts on construction dispute resolution. For instance, Hinchey (2012) proposes a dispute resolution framework which emphasizes avoidance strategies and advocates for the use of standing neutrals, non-binding mechanisms and binding mechanisms respectively when avoidance fails. Cheung's (1999) framework also largely reflects what pertains in practice as could be observed with the multi-tiered dispute resolution frameworks found in all the major standard form contracts for engineering and construction works such as the FIDIC and NEC3 suites of contract. From the review, it is posited that modern construction dispute resolution revolves around three main concepts namely dispute avoidance, management and determination/resolution and a good construction dispute resolution framework will often reflect aspects of all these concepts. Avoidance focuses on preventing the emergence of the dispute all together or reducing its occurrence. Dispute management focuses on nipping disputes in the bud as soon as they emerge. Finally, resolution focuses on helping the parties to address disputes themselves or with the help of a third party (either agreed or imposed). In effect, the problem of disputes is tackled at every stage of the project cycle (see Figure 1 below).

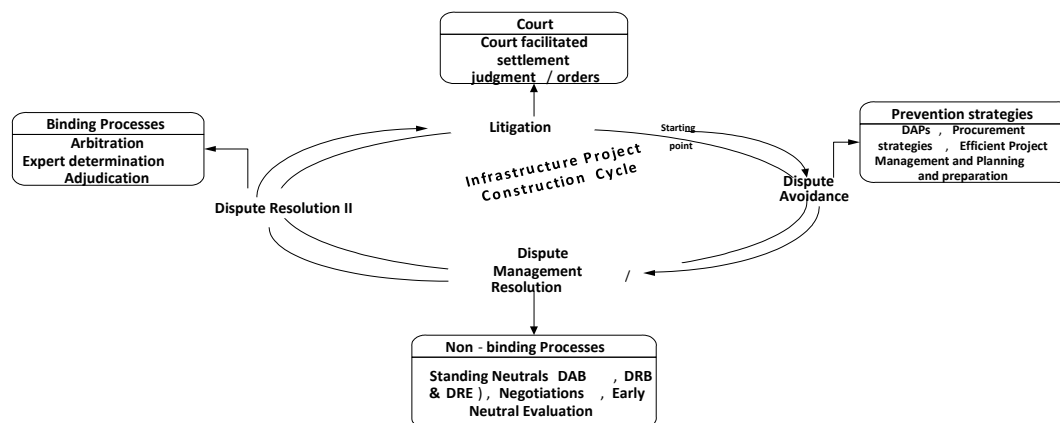


Figure 1: Framework for Dispute Resolution (Source: Literature)

Consequently, the focus of the study was to explore the extent to which the processes of infrastructure-related construction disputes involving the State and foreign contractors reflected the concepts captured in the above framework. To achieve this aim, this aspect of the larger study had a single objective namely to inductively explore the process of dispute handling from the perspective of participants in the industry to identify building blocks of the extant construction dispute resolution framework.

## RESEARCH APPROACH

Given the aim and objective of the study, a qualitative approach underpinned by an interpretivists' philosophical paradigm was adopted. As Neuman and Krueger (2003) noted, the goal of this paradigm is to understand social phenomena through the eyes of participants. This approach was useful in view of the general lack of prior research on

the subject of investigation. With Ghana as a holistic case, the study relied on views of participants in major infrastructure construction activities involving the State and other public entities. Semi-structured interviews were conducted with forty-five employees of five Government Ministries and six public institutions regularly involved in major construction projects. Additionally, eleven individuals from foreign construction firms and adjunct organisations were also interviewed. Participants were selected based on their previous involvement in major public infrastructure construction activities and experiences with construction disputes resolution. The semi-structured interviews followed Patton's (1990) general interview guide technique and were organized into four sections covering themes such as the procurement process (choosing dispute resolution mechanisms), disputes and the resolution process. This report primarily examines the theme on dispute resolution.

The analysis of the data was thematic. Data obtained from the interviews were transcribed, edited and coded for concepts and subsequently, themes. The coding process which was accompanied by memoing was in three segments namely open, axial and selective. The initial coding process broke down the data into chunks generating a total of 89 codes. These codes were examined for the different dispute resolution processes in use. A total of ten mechanisms were identified at this stage from the data coded (see Figure 2 below). Several other concepts identified at this stage (including "*selection*", "*cost*", "*delay*" and "*neutrality*") were found to be associated in different ways with the ten resolution processes identified.

Consequently, the second phase of the coding, explored further the connections between each of the ten concepts representing various ways of addressing construction disputes and the remaining concepts through the data. Using the concept of "*international commercial arbitration*" (ICA) as an example, it was discovered after further examination of the data that concepts such as "*neutrality*", "*fairness*", "*cost*", "*delay*" and "*destruction of relationships*" had been used in relation to ICA in different contexts. The first two had been used in relation to factors considered when selecting ICA, whilst "*cost*", "*delay*" and "*destruction of relationships*" were identified as characteristics of ICA in the Ghanaian context. Concepts which were linked to ICA in similar ways were grouped and assigned a broader label which encapsulated the nature of the connection. Thus, concepts such as "*fairness*", "*neutrality*", "*enforceability*", "*confidence*" and "*funding*", for instance, were clustered under the sub-category called "*selection of ICA*".

As more links were established and explored during the memoing process, a storyline on the extant framework for construction dispute resolution began to emerge. The final stage of the analysis explored patterns in the data for how the different resolution mechanisms identified fit into a common framework. On the basis of what parties agreed and frequency of use, three categories of dispute resolution mechanisms were found. The themes, patterns and narratives which emerged from the qualitative data analysis are discussed below.

## **DISPUTE RESOLUTION MECHANISMS**

The first of the three categories of dispute resolution processes identified from the data were mechanisms which the parties agreed at the contract stage and eventually utilized regularly. These were Engineers' determination, negotiations (amicable settlement) and international commercial arbitration (ICA). The second category of dispute mechanisms were agreed by parties at the contract stage but were rarely used. These were mediation, dispute adjudication boards and expert determination. Then

there was a third category of dispute resolution mechanisms which were not agreed by parties but were ultimately utilized to resolve disputes, namely litigation and informal third party interventions (see Figure 2 below).

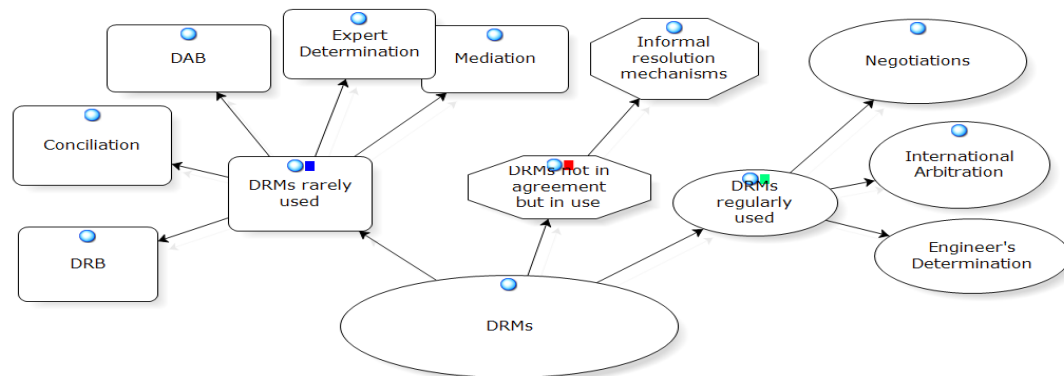


Figure 2: Dispute Resolution Mechanisms (DRMs) in use (Source: Field Data)

Predictably, the three dispute resolution mechanisms regularly used by parties to major infrastructure projects in Ghana were the same as those outlined in the fourth edition of the FIDIC Red book, 1987, the commonly used standard forms. Parties generally stuck to dispute mechanisms agreed at the beginning of their contractual relationships. On limited occasions, parties employed other mechanisms such as mediation, conciliation, expert determination and DAB with varying results. The existing dispute resolution process was beset with numerous challenges. Contractors generally loathed the quasi-judicial role of the Engineer under the Red book, 1987. The reasons for this are well documented (Ndekugri et.al 2007). In the context of Ghana where the transactions were mainly government projects, this dislike was exacerbated by the fact that the Engineer was often a government department.

The introduction of Dispute Adjudication Board as a replacement for Engineer's determination under the new FIDIC Red book, 1999 had not yet made the needed impact. Disputes encountered related mainly to projects executed under the fourth edition of the Red book. Even for the handful of projects utilizing the new FIDIC Redbook, 1999, the use of DABs was hampered by lack of adequate knowledge of the workings of the process, lack of policy direction and guidelines for its use by government departments and the cost implications of maintaining it throughout a project cycle. International commercial arbitration, the other right-based dispute resolution option was a mechanism of last resort for a number of reasons. For contractors and the Employer in particular, it was an expensive choice characterized by delays, general dissatisfaction and destruction of relationships (see also Asouzu 2001).

Moreover, parties underutilized the amicable settlement period. At best, they attempted negotiations. At this stage, contractors were often in a hurry to escalate disputes to ICA outside the jurisdiction of the employer. The employer, on the other hand, though desirous to settle disputes internally, lacked adequate knowledge and skills to apply or encourage the use of intermediary dispute resolution processes such as mediation, conciliation and DABs. Further, the absence of legal obligation on parties to attempt amicable settlement under the FIDIC arrangement meant that parties did not have any contractual or legal reasons to make the most of the period of amicable settlement. To this extent, the period provided for amicable settlement under the FIDIC arrangement was merely cosmetic. The introduction of the process of

amicable settlement after a determination by an Engineer or a DAB meant that parties approached the process at a time when they had been sharply polarized by the earlier determination. Where the issues between the parties were finely balanced on the merits, the aggrieved party would have already signalled its intention to proceed to international arbitration. The implication was that the amicable settlement process counted very little.

Again failure of parties to identify in advance ADR mechanisms to be used during the amicable settlement period meant they only had to do this when they were already involved in a dispute and had little or no appetite for collaboration. It is submitted that the issues with construction dispute resolution in Ghana were symptoms of a bigger problem with the dispute resolution framework for major projects. Dispute resolution was considered as a matter for the back-end of the project cycle. Disputes became an issue only when they emerged during and after the project. Parties paid little attention to disputes and related issues at the initial stages of the project.

## DISCUSSIONS

The modern approach to construction dispute resolution as reflected by the framework (see figure 1) requires parties to start thinking about disputes right at the commencement of and during the project (Vorster 1993; Diekmann and Girard, 1995). Parties to projects pursue dispute prevention and management approaches in addition to the use of resolution mechanisms agreed in the contract (Fenn *et al.* 1997; Cheung 1999; Hinchey 2012). Dispute avoidance approaches focus on the initial stages of a project and aim at ensuring that the parties start right so as to reduce or prevent the occurrence of disputes (Vorster 1993; Yates and Duran 2006). The literature identifies a broad range of dispute avoidance techniques most of which fall under one of the following four areas namely the use of standing neutrals, procurement and relational contracting; effective project management; and project planning and preparation. The last three avoidance methods are not considered alternative dispute resolution mechanisms. They focus on avoidance rather than resolution per se. On the first set of techniques, Gerber (2000) identifies three main standing neutrals or Dispute Avoidance Procedures (DAPs) namely the Dispute Resolution Adviser (DRA) (or the Project Neutral/Dispute Resolution Expert (DRE)), Dispute Adjudication Boards and Dispute Review Boards (see also Cheung and Yeung 1998; Harmon 2003; Yates and Duran 2006). The last two are often referred to collectively as Dispute Boards.

The second set of avoidance techniques uses procurement and related processes to manage relationships so as to avoid disputes. The essence of this approach is that maintaining good relationships and healthy communication links among project teams engenders cultural shift from adversarialism to cooperation. It is envisaged that such change in project environment encourages parties to resolve their differences more easily and thus avoid disputes. Examples of this set of techniques are partnering, alliancing, integrated project delivery systems and equitable risk allocation (see Bresnen and Marshall 2000; Hinchey 2012). The third set of avoidance techniques is management-related. The focus of these techniques is on ensuring effective documentation, cost and schedule control, quality management and constructability (Fenn *et al.* 1997; Yates and Duran 2006). Morgan (2008) recommends about thirteen such avoidance techniques. These include training of project staff, being abreast with the terms of the contract, communicating effectively on projects and ensuring compliance. The final set of avoidance techniques entails activities relating to general planning and preparation for projects (Mitropoulos and Howell 2001). The

effectiveness of these avoidance strategies can be greatly boosted if dispute causes can be sufficiently predicted at the inception of projects (Diekmann *et al.* 1994).

Some of the techniques listed under avoidance are also used for dispute management. The use of standing neutrals and negotiations are examples of such mechanisms. The idea underpinning dispute management is to ensure that festering disputes are nipped in the bud and not allowed to escalate. The current approach to dispute avoidance and management is summed up in the findings of the Dispute Prevention and Resolution Task Force of the Construction Industry Institute (CII) which recommended that parties 'start right' and 'stay right' (Vorster 1993; Diekmann and Girard 1995; Yates and Duran 2006).

The resolution mechanisms include mediation, adjudication, expert determination and arbitration. These are common among construction industry users in the United Kingdom, United States of America, Australia, Singapore and Hong Kong (Hibberd and Newman 1999; Gaitskell 2006). These options are dominant both on minor and major construction projects (Harmon 2003). The main characteristics of these dispute resolution mechanisms are well covered in the literature (Blake *et al.* 2011). Dealing with disputes in construction, thus, entails having an efficient approach to dispute avoidance, an effective dispute management strategy and a swift, cost-effective, fair and just resolution process.

Parties involved in construction dispute resolution in Ghana lacked a coherent strategy which integrated the various approaches to dispute handling into a logical process. Compared to the framework developed from the literature (see figure 1), there was a weaker emphasis on dispute avoidance and management - limited use of intermediary mechanisms. When initial efforts to resolve a dispute fail, it festers until it is eventually resolved by arbitration. Lack of coherent dispute resolution strategy is not a feature only of the Ghanaian industry – even in developed countries where much of the literature on dispute resolution processes have been developed, most parties apply the mechanisms and techniques for dispute handling disparately.

The Dispute Resolution Efficiency Cycle (DREC) is a process designed by this study to fill this gap by encouraging a holistic, integrated and context-specific approach to dispute resolution. The DREC was inductively developed based on interviews conducted and the dispute resolution literature (Mante 2014). Some key aspects of the DREC are briefly described below. Data on how to improve construction dispute resolution in Ghana were coded and concepts generated. The concepts were further categorized under four themes on the basis of the project stage at which these ideas may be properly explored and implemented (see Table 1 below).

It must be stressed that the list of concepts outlined under each of the categories developed from the data were not meant to be exhaustive. The categories were then juxtaposed with a typical project cycle in Ghana leading to the development of a four-stage construction project dispute resolution cycle called DREC. The four stages are the pre-project, dispute resolution system design, management/resolution and the post-resolution evaluation stages.

Table 1: Four Categories and their respective concepts (Source: Mante 2014)

<b>DREC Strategies</b>						
<b>Categories</b>	<b>Context / Risks Assessment (10 Elements)</b>	<b>Designing the DR System (5 Elements)</b>	<b>Dispute Avoidance and Resolution (6 Elements)</b>	<b>Evaluation of Outcome-Post DR (5 Elements)</b>		
<b>Concepts and Actions</b>	Learning from Past experiences	Focus on agreeing a dispute resolution framework capable of delivering dispute resolution objectives of the Employer/ Contractor	Use Standing neutrals (e.g. DABs, DREs) and other ADR mechanisms to avoid and manage budding differences	Compare outcomes with Employer/ contractor's goals on dispute resolution in relation to specific project; and National policy objectives on infra-related dispute resolution		
	Investigating the cost of dispute resolution				Training Government and Contractor staff in ADR practice	
	Need for Policy and overriding objectives for Infrastructure-related dispute resolution.		Use collaborative procurement strategies			
	Considering impact of contextual factors-e.g. political interference, legal framework etc.					Establish a unit for Infrastructure-related dispute resolution
	Promoting ADR use.		Aim at addressing previous dispute resolution challenges through new process		Improving project planning and management	
	Developing standards for the use of ADR by government entities.					
	Streamlining institutional roles on infrastructure-related dispute resolution.	Identify, agree, incorporate specific mechanism to be used during the period for amicable settlement		Cutting cost of Arbitration – e.g. implementing cost sharing agreements	Identifying failures-why?	
	Education and Training on relevant dispute resolution.					Training of Personnel
	Setting the agenda to focus on dispute avoidance and management - Develop policy on Prevention	Setting up a Contract review unit	Instituting a forum where failures and successes of DRMs utilized will be discussed among relevant staff of Employer			
Legal reform						
<b>Likely Outcomes</b>	Development of Avoidance/management/resolution strategies	Incorporation of Avoidance/management/resolution strategies into Project Contract	Implementation of Avoidance/management/resolution strategies	Evaluation of Avoidance/management/resolution strategies		

In effect, each of the four categories with its respective concepts/actions corresponded to one of the four elements of the DREC.

The pre-project stage covers the period between the development of the initial project brief and the procurement and tendering phase. At this stage, the Employer may focus attention on the concepts/actions outlined under the category called “*Context/Risk Assessment*”. For instance, the Employer may develop/update its overriding construction dispute resolution objective(s) at this stage. Ultimately, this was to be the starting point for the development of a project-specific avoidance, management and resolution strategy. The dispute resolution system design phase aligns with the period from the commencement of procurement and tendering through to the signing of the relevant project contract. Equipped with the ideas garnered and steps to be taken at the pre-project stage, the Employer may engage with the actions outlined under the category labelled “*designing the dispute resolution system*”. For instance, the



Employer may, at this stage, focus on negotiating a dispute resolution framework capable of delivering its dispute resolution objectives. Even where the dispute system is provided under a standard form, as is often the case with the construction industry, the Employer's team could examine critically the existing system and determine to what extent it could be modified or implemented so as to achieve efficiency within the context of the specific project.

The dispute management/resolution stage covers the construction to completion phase and aligns with the category called "*dispute avoidance and resolution*". At this stage the Employer may implement the project-specific strategies on avoidance, management and resolution. The post-dispute resolution phase spans the period immediately after the completion of the project through to the period after all or key emerging disputes have been resolved. This phase corresponds to the category labelled "*evaluation of outcome - post dispute resolution*". At this stage, the Employer may evaluate the dispute resolution strategy for the completed project. Some of the strengths of the DREC model are its ability to enhance dispute awareness, integrate dispute handling approaches, provide a context-specific strategy for dispute handling and feed-forward lessons from previous cycles.

## CONCLUSIONS

Increased focus on infrastructure development as a means of achieving economic growth in developing countries has led to growth in construction activities in the public sector. As an unintended consequence, growth in construction activity has a knock-on effect on dispute emergence. The process of construction dispute resolution in Ghana, as this study found, was beset with much inefficiency. Absence of coherent dispute resolution strategy meant limited focus on dispute handling strategies other than the traditional resolution mechanisms in use which were plagued by numerous practical and contextual challenges. To deal with the problem, a modern approach focusing not merely on resolution but also avoidance and management was required. Beyond this, it was imperative that such an approach was cohesive. Not only must the dispute handling strategies be integrated but such plans must also be integrated into programmes and plans of individual parties taking into account the project context. This is where the Dispute Resolution Efficiency Cycle comes in.

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