

AN EXPLORATION OF INTERPERSONAL CONFLICT CAUSATION FACTORS IN THE BUILT ENVIRONMENT

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Conflict has become synonymous with the construction sector. Researchers and practitioners alike have made numerous efforts to address this blight. Despite the abundance of literature present, interpersonal conflict remains ever-present. This study aims to identify the commonality of occurrence of interpersonal conflict causation factors in the built environment (BE). A comprehensive literature review takes place identifying 184 conflict causation factors. 15 semi-structured interviews take place with industry professionals during a content validation phase identifying 47 factors to be classified as 'Human' conflict causation factors. 62 participants complete a questionnaire to identify the commonality of each Human factor using a 1-5 Likert scale ranging from 'Never' to 'Always'. The top three most common factors are Difference in personality, Difference in views, and Pressure/Expectation/Workload. High standard deviation values present across results are indicative of the complexities at play when addressing conflict causation. These findings highlight the importance of increased soft skills training in the sector.

Keywords: construction; disagreement; dispute; misalignment

INTRODUCTION

The true origin of human nature transcends time and remains a subject of debate, with explanations for fundamental emotions and behaviours, such as love, violence, and conflict, often provided through religion and philosophy (Euwema and Giebels, 2024). Despite ambiguities surrounding its origins, human nature is inherently intertwined with conflict, holding a prominent place in civilisation's history. Ancient manuscripts depict a variety of disputes ranging from clan misalignments to inter-imperial war as far back as the times of Mesopotamia. These conflicts were often driven by more 'simplistic' motives such as land and resources; however, as society has evolved, so too have the manifestations of human conflicts. Modern misalignments are far more complex social and economic entities spreading across all aspects of life. In recent years, the manifestation of these conflicts in an organisational context has become a hot spot for academic and practitioner research alike. Above all sectors, the construction industry has long been characterised by its conflict-burdened environment and the adversarial nature in which it operates. The construction sector holds several unique qualities that distinguish it from any other, making it a breeding ground for conflict/dispute creation. Projects are fast-paced, complex by nature, and rely heavily on the cooperation of a multitude of stakeholders who all have varying interests, often resulting in formal dispute processes occurring. The industry's

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reputation is not unfounded, with the statistics on construction disputes utterly condemning the sector globally. The value of disputes in construction globally in 2020 exceeded \$48.5 billion, and extension of time requests (EOT) accrued close to 600 years (Jagannathan *et al.*, 2021). The relationship between conflict and poor performance is irrefutable and acknowledged as a primary source of project inefficiency (Zouher Al-Sibaie *et al.*, 2014).

With Alternative Dispute Resolution (ADR) continuing to be the front foot of the industry regarding dispute resolution. ADR methods are now commonly implemented into standard contract forms as an attempt to prevent disputes. Popular types of ADR are adjudication, arbitration, negotiation, mediation, dispute review boards, and dispute resolution advisor systems. This research takes a step back from holistic conventional studies, which take a wider view on conflict causation. This study focuses exclusively on "Human" conflict causation factors as classified by a content validation process. Interpersonal conflict emerges throughout all stages of a project's lifecycle, and although literature identifying interpersonal conflict as commonplace within the construction industry is plentiful (Meng, 2012; Brockman, 2014) there is limited cognisance of the commonality of specific triggers. Having a complete and comprehensive understanding of the manifestation of conflict because of personnel dynamics can provide a unique insight for improving organisational culture and operational effectiveness. Once there is a clear cognisance of the specific Human conflict triggers within the BE, the ability to construct an effective and efficient individualised framework to avoid such pitfalls will subsequently follow.

Interpersonal Conflict Causation Factors: A Review

As part of broader research investigating personality and interpersonal conflict in the BE, a literature review identifies more than 180 conflict causation factors. This paper focuses on a subset of these (47) classified as "Human" factors through a content validation process which is discussed further in the method section.

Behaviour and Discipline

Inter-dependent tasks are commonplace within the industry and are often used in the creation of competent project schedules (Srouf, *et al.*, 2013). Subsequently, any indiscipline when conducting duties or while acting within any capacity of employment can cause conflict between personnel and or organisations (Adeyemi and Aigbavboa, 2020). Indiscipline can manifest in many forms such as disrespect, complaining, and flat-out disobeying instruction. The manifestation of this indiscipline is usually associated with professionals who are difficult to contact and absent (Kipyego, 2013). These professionals also struggle to apply discipline to others, which compounds the issue.

According to Adeyemi and Aigbavboa (2020), this indiscipline encompasses a variety of issues ranging from dishonesty, nepotism, drunkenness, and misappropriation of funds to minor matters like inadequate commitment to work and refusal to take responsibility. Conflict causation factors related to employee indiscipline are commonplace in the literature with numerous factors such as unpunctuality to work, loitering, and opportunistic behaviour being identified (Colin, *et al.*, 1996; Mitropoulos and Howell, 2001; Ejohwomu, *et al.*, 2016; Adeyemi and Aigbavboa, 2020). The emergence of conflict because of this indiscipline often stems from the reliance of one professional on another's successful completion of their task. However, this is a double edge sword as in direct contrast to this, Saiti (2015), identified the emergence of conflict resulting from one professional identifying that if

another is successful in their pursuit of a goal, this subsequently prevents the realisation of their own goal. This is often referred to as “misalignment/difference in goals” and has been highlighted by several authors. (Salleh and Adulpakdee, 2012; Makaya and Ndofirepi, 2012; Longe, 2015).

As the construction workforce diversifies so too do the personality types of personnel employed within the sector. Factors such as different upbringings have been cited as contributing to influencing personality types (Isa, 2015). Differences in personalities have been identified by, Saiti (2015), Heather (2016), and Adeyemi and Aigbavboa (2020), as being key conflict drivers. An interesting finding of Adeyemi and Aigbavboa, (2020), suggests that a reluctance to recognise these varieties in personality types contributes to conflict initiation.

These personal incompatibilities encompass numerous causation factors noted by academics including opinions, differences in values, and negative attitudes, (Acharya, *et al.*, 2006; Salleh and Adulpakdee, 2012; Kipyego, 2013). Differences in personality types can result in professionals articulating their viewpoints in contrasting styles resulting in a clash among the parties (Mudis and Yambo, 2015). In this regard, employees can at times struggle to interpret colleagues’ moods/attitudes with the interpretation of escalation/de-escalation highlighted by Acharya, *et al.* (2006).

Managerial Issues

In a study titled ‘How constructive is construction law?’, Jones, (1994), highlighted ten main sources of construction conflict with number one simply being labelled ‘management’. Although close to 30 years old Jones's identification of management as a driving force of conflict remains true. Despite advances in the understanding of critical components of successful management, authors such as Shawa, *et al.* (2018), and Tariq and Gardezi, (2023), still identified management as a key issue concerning conflict creation. The word “management” encompasses a large array of tasks, interactions, and situations within the construction industry. More specific issues intricately linked to managerial duties have been identified such as vested interests, professional culture problems, favouritism, tribalism, bribery, and a dictator leadership style (Tshuma, *et al.*, 2016; Ejohwomu, *et al.*, 2016).

Communication and Misalignments

Conflict resulting from poor, incomplete, or absent communication channels is perhaps the most cited human factor (Jones, 1994; Cheung and Yiu, 2006; Waldron, 2006; Acharya, *et al.*, 2006; Brockman, 2014). The literature shows numerous studies highlighting different issues that essentially fall under the communication umbrella. For example, Miktus and Mitkus, (2014) highlighted “deprived communication” as a primary conflict factor, Waldron, (2006), suggesting that “misunderstandings” were a primary trigger. Correspondingly “misinterpretations” were cited by authors as conflict causation factors. Misinterpretation of client’s requirements, misinterpretation of contract information, interpretations, misunderstanding, and confusion are all symptoms of poor communication practices, which have been identified in the literature (Waldron, 2006; Miktus and Mitkus, 2014; Ejohwomu, *et al.*, 2016). Saiti, (2015), stated that poor information processes, bad timing, poor human relationships, and poor encoding of messages were all conflict contributors.

Perceptions play a pivotal role in conflict creation with Brockman, (2014), citing perceived levels of effort and perceived safety issues as conflict drivers. In their previously mentioned study, Miktus and Mitkus, (2014), provide a unique perspective on construction conflict. This study suggests that it is likely that the true causes

identified in the literature are not the original causes. This study goes on to classify the causes identified in the literature as "Obviously wrong, potentially right but unclear formulated causes and true causes of conflict". Initially, poor communication was the sole causation factor Miktus and Mitkus, (2014), deemed as a true cause of conflict within the construction industry. Based on "practical experience" Miktus and Mitkus, (2014), hypothesized that communication accounted for 90% of all construction conflicts. The conclusion of this study shows that the effects of psychological defence and unfair behaviour are also being identified as true causes of conflict. Various other human causation factors have been highlighted in the literature such as tick-box mentality, home/life issues, people getting defensive, and lack of team pressure/ expectations (Bristow and Vasilopoulos, 1995; Brockman, 2014; Miktus and Mitkus, 2014; Ejohwomu, *et al.*, 2016).

This study focuses on investigating the prominence of specific conflict causation factors. The shift in focus to create a comprehension of the commonality of specific conflict causation factors may better inform the creation of conflict management and avoidance policy by allowing for a more nuanced approach. Table 1 illustrates the 47 interpersonal conflict causation factors utilised as part of this study.

METHOD

A literature review was conducted identifying 184 conflict causation factors in the BE. These factors are initially categorised into five key themes Human (59), Organisational (45), Contractual (26), Environmental (49) and other (5). To ensure academic rigour content validation takes place to assess the thematic classification of factors. Although metric-based validity tools such as CVI and CVR are often used, due to the number of conflict factors present (184) this method is deemed to be impractical. Similarities can be drawn to Zamanzadeh, *et al.* (2015) where the attempt to implement a CVI with a large data set proves challenging resulting in a more relaxed average score method. In addition to the challenge of thematic overlap, cognitive overload and the introduction of bias due to fatigue are concerns. Pilot and Beck, (2006) confirm that the application of content validity indices to large data sets is challenging. Consequently, a qualitative approach is taken to content validation in the form of 15 semi-structured interviews. Interviews take place with industry personnel in managerial roles or higher currently employed in the BE in the Republic of Ireland (ROI).

Both in person and online mediums are utilised for interviews depending on participant preference. Participants are provided with the full list of 184 factors identified in the literature review. To facilitate trust and in line with Harvey, (2011), no audio or visual recording takes place. Due to large data sets shorthand notes are implemented with Rutakumwa, *et al.* (2020), discussing the effectiveness of this method. It is important to note that the primary focus of these interviews was to discuss the classification of the factors, no detailed discussion around frequency, cause, effect or process took place. This resulted in responses often being short such as "for me it is a human factor" or "I would have to disagree with the initial classification and suggest it is moved to organisational". Upon completion of the interviews, notes are consolidated, resulting in 11 factors being removed, 28 factors amalgamated due to being interpreted as the same, 14 factors being reworded to ensure clarity, and 34 factors facing re-classification. This results in 47 factors being classified as human factors and therefore relevant for this study.

No	Factor	Source	No	Factor	Source
1	Banter/Horseplay	(Brockman, 2014)	25	Mentality of contractor	(Acharya, et al., 2006)
2	Bribery	(Adeyemi & Aigbavboa , 2020)	26	Misappropriation of funds	(Adeyemi & Aigbavboa , 2020)
3	Communication (Interpersonal)	(Jones, 1994; Cheung & Yiu, 2006; Waldron, 2006; Acharya, et al., 2006; Brockman, 2014)	27	Misinterpretation of client's requirements	(Ejohwomu, et al., 2016)
4	Complaining about work	(Adeyemi & Aigbavboa , 2020)	28	Misunderstanding & confusions	(Sykes, 1996; Miktus & Mitkus, 2014)
5	Cultural Differences	(Jones, 1994)	29	Negative attitudes	(Acharya, et al., 2006)
6	Dictator leadership style	(Tshuma, et al., 2016)	30	Negligence	(Colin, et al., 1996)
7	Difference ways of carrying out the same Task	(Acharya, et al., 2006)	31	No clear conclusion to a disagreement / argument	(Adeyemi & Aigbavboa , 2020)
8	Differences in goals	(Salleh & Adulpakdee, 2012; Longe, 2015; Makaya & Ndofirepi, 2012)	32	Opportunistic behaviour	(Mitropoulos & Howell, 2001)
9	Differences in personality	(Isa, 2015)	33	People getting defensive	(Miktus & Mitkus, 2014)
10	Differences in values	(Kipyego, 2013)	34	People unsure of their role	(Kipyego, 2013).
11	Differences in views	(Salleh & Adulpakdee, 2012)	35	People wanting a certain outcome that suits themselves	(Ejohwomu, et al., 2016)
12	Dishonesty	(Adeyemi & Aigbavboa , 2020)	36	Perceived Levels of Competence/Effort	(Brockman, 2014)
13	Disobeying instruction	(Adeyemi & Aigbavboa , 2020)	37	Perceived Safety Issue	(Brockman, 2014)
14	Disrespect	(Adeyemi & Aigbavboa , 2020)	38	Poor human relationships	(Saiti, 2015)
15	Drunkenness	(Adeyemi & Aigbavboa , 2020)	39	Pressure/Expectation/Workload	(Jones, 1994)
16	Excessive Correspondence	(Acharya, et al., 2006)	40	Refusal to take responsibility	(Adeyemi & Aigbavboa , 2020)
17	Favouritism/Nepotism	(Tshuma, et al., 2016; Adeyemi & Aigbavboa , 2020)	41	Tick box mentality	(Ejohwomu, et al., 2016)
18	Frustration	(Adeyemi & Aigbavboa , 2020)	42	Unfair behaviour	(Miktus & Mitkus, 2014)
19	Home/Life Issues	(Brockman, 2014)	43	Unpunctuality to work	(Adeyemi & Aigbavboa , 2020)
20	Inadequate Commitment to Work	(Adeyemi & Aigbavboa , 2020)	44	Unrealistic Expectations	(Jones, 1994; Bristow & Vasilopoulos, 1995; Yiu & Cheung, 2007)
21	Information not shared correctly	(Miktus & Mitkus, 2014)	45	Varied experiences	(Salleh & Adulpakdee, 2012)
22	Lack of team spirit	(Bristow & Vasilopoulos, 1995)	46	Work force splitting into groups	(Adeyemi & Aigbavboa , 2020)
23	Language Barriers	(Ejohwomu, et al., 2016)	47	Workmanship (Individual)	(Jones, 1994; Brockman, 2014)
24	Loitering (Hanging around)	(Adeyemi & Aigbavboa , 2020)			

Table 1: Interpersonal Conflict Causation Factors

As the primary focus of the research revolves around the frequency with which a participant experiences specific conflict factors a Likert scale is utilised. Likert scales are an extremely powerful method of data collection used in social science research first developed in 1932 (Allen and Seaman, 2007). The scale titles are “Never, Rarely, Sometimes, Often and Always.” The use of named categories is user-friendly and provides a better participant experience (Dillman, *et al.*, 2014). The responses are then given numerical values ranging from 1 to 5 assuming that the interval is the same between each option (Willits, *et al.*, 2016). Participant particulars along with a personality assessment accompany the 47 human factors on the questionnaire as part of the wider research plan. The selection criteria for participants to contribute to this study is that persons are ‘currently employed in the BE in a management capacity in the ROI’. This is due to several reasons, primarily due to the central role managers play in the construction sector often acting as the go-between coordinating all tasks on site. Persons employed in management within the sector often find themselves in mitigating, managing, and resolving conflict making them perfect candidates for this study. The questionnaire is initially distributed on Microsoft forms to 36 known industry personnel who fit the research criteria. Snowball sampling is then utilised where participants are encouraged to send the questionnaire onto their colleagues of which also fit the criteria. As often noted as a characteristic of snowball sampling the total number of eligible participants who received the questionnaire beyond the initial distribution cannot be known (Parker, *et al.*, 2019). 62 questionnaires are returned. Relevant data is then extracted, analysed and presented transparently. A list of the

most highly prevalent factors is created. Informed discussion around the results, implications and potential future works ensues.

RESULTS AND ANALYSIS

Upon completion of the data gathering stage, all results are formatted, analysed and presented in a systematic fashion, ensuring clarity and consistency. Each participant has indicated on a Likert scale (1=Never, 5= Always) their frequency of experience with 47 human conflict causation factors in the BE. To identify the most frequently experienced factors, mean score (m) analysis took place. Standard deviation (SD) values were also calculated to provide insight into the level of agreement amongst participants. High SD values are indicative of variance in experience or contextually driven difference, with low SD values highlighting commonality in experience of certain factors. Factors were then tabulated and ranked in descending of (m) scored from 1-47 and present in Table 2.

No	Factor	M	SD	No	Factor	M	SD
1	Differences in Personalities	3.71	0.86	25	Mentality of Contractor	3.06	1.10
2	Differences in Views	3.69	0.95	26	Poor Human Relationships	3.06	0.86
3	Pressure/Expectation/Workload	3.60	0.95	27	No Clear Conclusion to a Disagreement / Argument	3.03	0.97
4	Different Ways of Carrying Out Same Task	3.55	1.00	28	Opportunistic Behaviour	3.03	1.04
5	Frustration	3.55	0.80	29	Misinterpretation of Client's Requirements	3.00	1.09
6	Communication (Interpersonal)	3.52	0.76	30	People Unsure of Their Role	2.98	1.00
7	Differences in Values	3.47	0.95	31	Unpunctuality to Work	2.87	1.02
8	Negative Attitudes	3.47	0.94	32	Workmanship	2.87	1.03
9	Dishonesty	3.44	1.10	33	Perceived Safety Issue	2.84	1.02
10	Misunderstanding & Confusion	3.44	0.78	34	Banter/Horseplay	2.79	0.94
11	Refusal to Take Responsibility	3.40	1.03	35	Favouritism/Nepotism	2.76	1.07
12	Unrealistic Expectations	3.40	0.98	36	Varied Experience	2.76	0.99
13	Disrespect	3.39	1.03	37	Negligence	2.74	1.17
14	People Wanting a Certain Outcome that Suits Them	3.39	0.84	38	Excessive Communication	2.73	1.07
15	Dictator Leadership Style	3.31	1.08	39	Unfair Behaviour	2.73	0.95
16	Tick Box Mentality	3.27	0.93	40	Work Force Splitting into Groups	2.69	1.03
17	Differences in Goals	3.26	0.94	41	Cultural Differences	2.47	0.94
18	Complaining about Work	3.24	1.02	42	Home/Life Issues	2.45	0.99
19	Information not Shared Correctly	3.23	0.89	43	Loitering (Hanging around)	2.42	1.08
20	Disobeying Instruction	3.19	1.16	44	Misappropriation of Funds	2.34	1.18
21	People Getting Defensive	3.16	1.05	45	Language Barriers	2.29	1.17
22	Inadequate Commitment to Work	3.15	0.99	46	Drunkenness	1.94	1.20
23	Lack of Team Spirit	3.13	0.91	47	Bribery	1.60	1.11
24	Perceived Levels of Competence/Effort	3.10	1.00				

Table 2: Frequency and SD of Interpersonal Conflict Causation Factors

Correlation (r) analysis also took place. Due to the relatively small sample size (n=62) the (r) values should not be interpreted as statistically robust. The (r) values are used to provide nuanced observations into how certain factors may have a conceptual link.

DISCUSSION

In this section, authors interpret the results transforming analytical data into informed discussion around the frequency and distribution of interpersonal conflict causation

factors in the BE. The discussion follows a three-section structure addressing high, moderate and low scoring factors. Findings indicate a wide range of results with mean score analysis across all 47 factors showing a scoring range of ($m=1.60$) bribery to a ($m=3.71$) Difference in personalities.

There is much existing literature documenting the role 'difference in personalities' plays in construction conflict, with these findings compounding its presence and highlighting its prevalence within the sector. There is little surprise in the high levels noted with modern construction forces increasing in both size and diversification. Differences in views and values score the second and seventh most cited factors with ($m=3.69$) and ($m=3.47$) respectively. A strong correlation is observed between a difference in views and values with ($r=0.79$). This is suggestive that participants may interpret these factors to hold similar meanings or often find that when in conflict centre around disparity of views their values are often simultaneously misaligned. These factors 'Difference in personality' ($SD=0.86$), 'Difference in views' ($SD=.95$) and 'Difference in values' ($SD=.95$), form a tight cluster with a strong literary consensus of the close links between personality; one's values and their views. The moderately high standard deviations values are indicative of reasonable agreement amongst participants while highlighting the individualised nature of personal sensitivities. 'Pressure/Expectation /Workload' is also amongst the high scoring traits with an ($m=3.60$) which aligns strongly with the sectors interdependence between tasks seen at all stages of project life (Srouf, *et al.*, 2013). Similarly, we see a reasonably high SD value of ($SD=0.95$) suggestive of an overall agreement of its prevalence yet alluding to its presence being reliant on other factors such as project specific environments or job roles.

While highlighting the most cited factors provides a solid insight into construction conflict, it is equally important to address those which placed moderately. Factors scoring in a range of ($m=2.80$ to ($m=3.38$) yield interesting results when one focuses on the variation and correlation to other factors. For example, 'Disobeying Instruction' placed as the 20th most common factor with ($m=3.19$) accompanied by a ($SD=1.16$), suggesting highly polarised opinions amongst respondents. This again speaks to the incalculable number of factors at play in an active construction environment, which translates into disparity in the experience of conflict causation factors. A strong correlation is observed between 'Disobeying Instruction' and 'Disrespect' ($r=.60$), alluding to the potential for one to feel personally disrespected when their instructions are not followed. The complex managerial structure on large construction projects often leaves ambiguity in command chains, with leaner managerial structures arising across different sub-contractors. The commonality of 'People unsure of their role' ($m=2.98$) may further validate this real-life manifestation of the industry's structure.

When looking at some of the lower scoring factors it is of interest that 'Bribery' ($m=1.59$), 'Drunkenness' ($m=1.95$), 'Misappropriation of Funds' ($m=2.33$) and 'Negligence' ($m=2.74$) are amongst the most 'taboo' factors included in the questionnaire. In isolation it may be hard to draw conclusions from this, however when viewing in conjunction with SD scores where ($SD= 1.10, 1.19, 1.18, \text{ and } 1.17$) respectively these four factors account for 4 of the 6 highest SD scores seen. The disparity in responses inclines one to lean towards the implications of social desirability bias and the tendency for persons to underreport undesirable or sensitive issues (Krumpal, 2013). Although possible and contextually likely given the cultural norms associated with the construction sector, this disparity in exposure may again speak to the lack of consistency in the project environment across the industry. While

some environments may enforce policy and procedures which dilute these behaviours others may turn a blind eye. Overall, results indicate a consensus of top interpersonal conflict causation factors. However, the high SD scores generally seen across all factors are indicative of the nuanced complexities in place when dealing with conflict in the BE. To acknowledge these complexities, these findings must be considered part of a wider conversation on conflict in the sector.

CONCLUSIONS

This study aims to identify the commonality of occurrence of interpersonal conflict causation factors in the BE. Findings highlight a strong interpersonal misalignment present, with Differences in personality, Differences in views, and Differences in goals, all placing in the 10 most experienced factors. The strong correlation observed between these traits further alludes to an overarching sense of personality driven misalignments in the sector. Different ways of carrying out the same task and general frustration are also identified as causation factors commonly experienced. Factors that scored moderately such as disobeying instruction and people being unsure of their role are consistent with the fragmented inconsistent managerial structures in place across the sector. Low ranking factors namely, Drunkenness, Bribery, Negligence and Misappropriation of funds, spark interesting discussion with these factors accounting for 6 of the highest SD scores shown. Further investigation may be required to deduce whether social desirability bias may be present, or if it is the manifestation of vastly different integrity/policy enforcement across different projects. Overall, this research provides a comprehensive summation of the commonality of interpersonal conflict causation factors in the BE. The overarching presence of large SD in data aligns with the complexities present in the sector with a multitude of variables influencing conflict causation. Due to the strong representative of individualised causation factors such as disparity in views and values, the industry may benefit from the introduction of more comprehensive soft skill training programs. This will allow professionals to navigate through this difference in personality and opinions, assisting in the mitigation of the most cited factors.

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