



Democracy by Design: Examining the Relationship between Politics and Legislative Architecture

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Abstract

What does the architecture style of a parliament's legislative assembly reveal about a state's relationship to authoritarianism and colonialism? Physical design is traditionally seen as an objective or neutral component of the legislative process, divorced from political desires and strategic engineering. However, this paper argues that legislative architecture is acutely informed by two factors: a country's regime type in the year of construction and its colonial legacy. First, this paper proposes that different regime types desire distinct attributes in physical spaces. The needs of a regime type (either for debate or conformity) encourage the construction of legislative halls featuring architectural enablers of their desired attributes; thus, regime type in the year of construction may predict or inform the construction of legislative typologies. Secondly, it considers how colonial legacies, in particular British colonialism, influence the selection of architecture typology. It determines that certain legislature styles are inherited as a byproduct of British colonialism due to the symbolism bestowed on former British institutions. Finally, given the high financial cost associated with legislative construction and the legitimacy bestowed upon legislative spaces, this paper proposes that legislatures become "sticky" or resistant to change after their initial construction.

Introduction

Does architecture matter in politics? Cesare Maccari's 1888 depiction of the Roman Senate features Cicero in the centre of a large amphitheater while lawmakers watch his monologue from their semi-circular seat configuration. Elsewhere in history, polities opted for the Icelandic Althing, where leaders would meet in a circular formation to discuss relevant community issues.¹ In the United States, the Continental Congress utilised a variety of different styles, sometimes instructing members to face forwards in a Classroom, other times meeting in working pods. These diverse political configurations embedded the values of a polity into the very foundations, both literally and figuratively, of government structures. From the Opposing Benches of Canada's current parliament to Australia's present Horseshoe shape, countries display significant variation in the physical design of their legislatures. Does this variation stem from political forces at the time of building construction? And what social factors drive architectural diversity?

Architects have classified global legislatures into five distinct typologies: Classroom, Opposing Benches, Semicircular, Horseshoe, and Circular. Rather than viewing places of congregation as purely symbolic or performative, this paper considers legislative design choices as an intentional reflection of political desires. Derived from the belief that democracies value certain characteristics (dissension, debate, and opposition), while autocracies value other attributes (conformity, centralization, and assimilation), this inquiry investigates the selection of legislative architectural styles on the basis of regime type (autocratic, anocratic, and democratic). It also posits that legislative typology is informed by British colonial power dynamics as a manifestation of institutional heritability. Since erecting legislative chambers is a costly endeavor, and because places of political assembly are emboldened with legitimacy through tradition, legislatures may become "sticky" or resistant to change after their initial construction. Variation of legislative assemblies will be analyzed through a dual framework: first through an examination of regime type in the legislature's year of construction (Hypothesis 1), followed by a secondary investigation into the role of British colonialism on typology selection (Hypothesis 2).

Classifying the Five Architecture Typologies

1. Classroom

The Classroom style is the most common design typology, appearing in fifty-seven total legislatures. Classrooms appear to be modeled after the traditional educational environment, featuring uniform, rigid, and front-facing desks in which politicians are directed towards a governing party. Prevalent

¹ Max Cohen de Lara and David Mulder van der Vegt, "Analysis: These 5 Architectural Designs Influence Every Legislature in the World—and Tell You How Each Governs," *Washington Post*, March 4, 2017. <https://www.washingtonpost.com/news/monkey-cage/wp/2017/03/04/these-5-designs-influence-every-legislature-in-the-world-and-tell-you-how-each-governs/>

across Asia, Africa, and South America, the Classroom style first appeared in Estonia in the 1750s but amassed popularity from 1918 to 1936 in the USSR with the formation of The Congress of the Soviets. The style subsequently cropped up in countries around the world from Macedonia, to Honduras, to Niger.

Although the Classroom is the most abundant typology, it may also be the most passive. Since members face forward, rather than toward each other, there is less engagement with fellow representatives and more focus on the governing party or important individuals in a politburo. As such, this direction of attention may promote passivity and discourage conflict as legislators become listeners to, rather than leaders of, debate. Similar to a University lecture hall, power in the Classroom typology is concentrated at the front of the room rather than within the larger audience. Inherent in this lecture hall design is an imbalance of power between the authority figure (i.e., professor or governing party) who is emphasised by the room's design and the recipients of information (i.e., students or parliamentarians) who are deemphasised within the architectural space. The emphasis placed on a central figure or governing party in the Classroom style may make it an ideal system for anocratic or authoritarian governments that desire uniformity and discourage opposition.

For example, this passivity and diluted political engagement was present in The Congress of the Soviets, an early Classroom legislature, which was dubbed a pseudo-parliament. Despite the existence of representatives, important decisions for the USSR were made exclusively by the politburo, rendering the legislature a performative rather than substantive institution.

The Classroom style is currently observable in several authoritarian states like China, Russia, and North Korea; however, it also appears in many anocratic countries like Chad, Colombia, Djibouti, and El Salvador.

2. Opposing Benches

The Opposing Bench (OB) style was “born in a chapel of the medieval palace at Westminster where the first House of Commons was formed in 1547.”² The OB arrangement differs drastically from the Classroom as it features rows of inward facing seats against the two long sided walls of a chamber hall. The seats are separated by a prominent central aisle, traditionally measured to be two sword lengths or three meters apart.³ Historically, the two sword length measurement was selected to “ensure a crossing of swords with no bloodletting.”⁴ The separation of legislators on the basis of weaponry suggests a climate of conflict and disagreement rather than one of cooperation or collaboration. Popularized by the UK, Opposing Benches spread to many Caribbean countries, including Grenada in the 1650s, the Bahamas in 1815, and Barbados in 1874. OBs can be found in approximately 9% of global legislatures (n=19) and are the second most infrequent system.

2 Kim Dovey, “Traces of Democracy,” in *Framing Places: Mediating Power in Built Form* (London: Routledge, 1999), 87.

3 Dovey, “Traces of Democracy,” 88.

4 Dovey, “Traces of Democracy,” 88.

The seating design of the Opposing Bench systems requires an opposition party, placing it in stark contrast to the Classroom style which demands conformity. Since the legislature concentrates political parties together and positions these parties on either side of the chamber hall, there emerges a spirit of disagreement. The OB style is adversarial, quite literally pitting politicians against members of an opposing party. Power seems to be concentrated in opposition with emphasis placed on the defining central aisle that separates the principal parties.

Another common element of the opposing bench system is the lack of formal seating for all representatives. For example, junior politicians in a governing party or representatives of a minority party may be relegated to the back of the room without a formal seat, an area referred to as the “benches.” The denial of physical seating may also deny these politicians (and with them, their constituents) a voice in the legislative assembly. By delegating these individuals to the benches, they are deemed inconsequential to powerful political actors in the chamber, affirming that the physical placement of politicians matters to representation. Today, the OB style appears in many former British colonies, for example Jamaica, Canada, and Botswana, and is likely inherited through colonial institutional lineage.

3. Semicircular

The semicircular arrangement is the second most popular legislative style, appearing in fifty five countries. The semicircular arrangement should be seen as distinct from both the Opposing Bench and Classroom styles previously mentioned. Although focus is directed towards the front of the room, an element shared by Classrooms, it is not directed towards a politburo or central desk. Instead, representatives are able to see the speaker at the front of the room as well as each other. This can be observed in the United States Congress where Democratic representatives on one side of the semicircular hall look upon Republican representatives across the Senate floor. The Semicircle provides legislators with a visual line that may facilitate an exchange of nonverbal communication including facial expressions or hand gestures. The visual engagement of fellow representatives may be important to democratic systems that desire debate and discord.

The Semicircle is also the most traditional legislative shape and is rooted in ancient history. Semicircles can be traced back “to classical antiquity,” identifiable in Greek amphitheaters and in Cesare Maccari’s depiction of the Roman senate.⁵ But the semicircular arrangement truly made its popular comeback with the 1832 construction of *L’Assemblée Nationale* in France.⁶

Contrary to the passivity of Classroom legislatures, Semicircular spaces seem to reclaim political autonomy from a central party and restore it to the entire legislative hall. This seating arrangement features the eye contact and

⁵ Cohen de Lara and Mulder van der Vegt.

⁶ Cohen de Lara and Mulder van der Vegt.

interpersonal engagement found in the Opposing Bench system but lacks the OB's adversarial harshness. Furthermore, power is directed towards a central helm and emphasis is placed on a hearth region rather than in an aisle of opposition. The open amphitheater style seems to lend itself well to debate and discussion.

4. Horseshoe

The Horseshoe retains the straight benches of OB along the long walls of a legislative chamber; however, it forms a Semicircle around the back of the hall. The benches are connected by arched seating along the back end. The Horseshoe is an addendum to both the Opposing Bench and Semicircle, as it merges architectural elements present in both systems. Horseshoe systems can be found in 26% of legislatures (n=50) placing them third in the frequency of assembly construction.

The Horseshoe model “emerges in many Commonwealth countries, including Australia, Malaysia and South Africa.”⁷ Since it possesses elements of the OB, which traces back to UK colonialism, many former colonies that do not employ OB use the Horseshoe. This can be observed in Australia, where the original OB style was abandoned in 1927 during a provisional parliament in favour of the Horseshoe style. Natalie Cooke, Director of Chamber Research at the Australian House of Representatives writes that the guarantee of formal seating addresses one of the major problems in the Opposing Bench arrangement and “may have influenced the desire for a Horseshoe shape, which allows for a larger majority on one side if necessary.”⁸

Regarding power dynamics, the Horseshoe system does retain certain adversarial elements of the Opposing Bench system. For example, the two major parties (governing and opposition) still maintain their monopoly of the Opposing Bench segment (i.e., where the two benches face off). Smaller parties are subsequently delegated to the arched section around the back of the building, protecting their voice and guaranteeing them formal seating.

5. Circular

Seemingly inspired by round-table conversations that encourage engagement and facilitate communication, Circular legislatures require all members to face the center in a perfect circle. Modelled on the traditional Icelandic Althing of the eighth century and resurrected by architect Günther Behnisch in the 1980s, only 5% (n=11) of state legislatures utilize this typology. Amidst tensions between East and West Germany, Günther Benisch reimagined political spaces by constructing a completely Circular legislature designed for political discord.⁹ Although it is now out of use in Germany, the Circular style can be found in a diverse range of countries including Slovenia, Micronesia, and Jordan.

⁷ Cohen de Lara and Mulder van der Vegt.

⁸ Natalie Cooke, *Director of Chamber Research Australian Parliament House*, 2021.

⁹ Cohen de Lara and Mulder van der Vegt.

Power appears to be concentrated in the middle hearth region, creating shared community and easy discourse. The circular style may facilitate debate and discussion, as it erodes the adversarial and harshness of straight lines, found in the Horseshoe or the Opposing Bench system, by blending all representatives into a cohesive, joint body. It also presents as a stark alternative to that of the Classroom style for it promotes eye contact, visibility, and active participation through the decentralization of discourse.

Mapping the Five Architecture Typologies

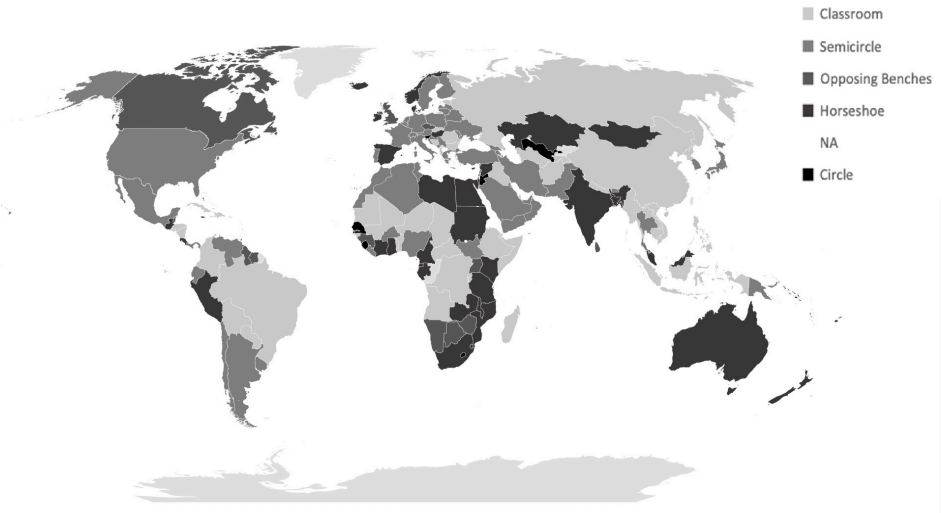


Figure 1.1: Where are legislative assemblies found?

Literature Review

From the work of Gary Cox or Matthew Shugart on electoral systems to the research by Mala Htun on ethnic and gender quotas, political scientists have long studied the influence of institutions on political systems. Although the aforementioned scholars each study different elements of the legislative process, there exists a fundamental consensus across their work: institutions matter in shaping political outcomes.

The Effect of Electoral Systems and Legislative Quotas on Politics

One element of the democratic process that has been studied in depth is the relationship between electoral rules and election results. Pioneered by scholars like Gary Cox and Matthew Shugart, academics have identified trends within electoral systems as certain voting models produce predictable political outcomes.¹⁰ Beyond electoral rules, the introduction of reserved seats or party quotas to bolster the representation of marginalized groups has been an effective

10 William H. Riker, "The Two-Party System and Duverger's Law: An Essay on the History of Political Science," *The American Political Science Review* 76, no. 4 (1982): 753–66, accessed August 20, 2021. [doi:10.2307/1962968](https://doi.org/10.2307/1962968).

institutional that addresses political diversity. Nearly 50 countries currently use some form of affirmative action policy to encourage increased representation of marginalized groups, primarily ethnic and gender groups, in parliaments.¹¹

Studying political institutions is valuable to the democratic process because institutions often represent modifiable components of a political structure. Unlike other elements of the political process (cultural norms, individual belief systems, voting habits) architecture is incredibly concrete. This tangibility means that architecture (and many other political institutions like electoral systems or legislative quotas) can be formally changed through constitutional amendments, legislative rules, or architectural redesign. As Shuggart and Taapera explain, institutions like electoral systems “offer a promising field for ‘political engineering.’”¹² Since legislative architectural configurations are deeply ingrained institutions in the political process, regime types may have strategically engineered assemblies to produce desired political outcomes.

While much has been written on the subject of electoral systems and legislative quotas, this paper has chosen to approach the same question that motivated Cox and Shuggart—the impacts of institutions—through a different lens, that of architecture.

Understanding Regime Types

In order to study divergence within authority trends (i.e., democracy, anocracy, or autocracy), it is important to discuss the competing metrics used to understand, qualify, and codify a state’s democratic health. The Polity Project created by the Center for Systemic Peace, is an academic index that defines democracy “beyond the simple presence of elections.” Instead of factoring civil liberties into its calculation, Polity emphasizes the institutional strength of a government through their inclusion of five categorical variables pertaining to political office. The Polity Score is a composite value formed from two of Polity’s other indexes: a state’s Autocracy score and a state’s Democracy score.¹³

The first component of the composite Polity Score is the ten-point Democracy index which includes four institutional categories, “Competitiveness of Executive Recruitment,” “Openness of Executive Recruitment,” “Constraint on Chief Executive,” and “Competitiveness of Political Participation.” The ten-point autocracy scale features the four aforementioned categories with an additional fifth category, “Regulation of States.” The four shared categories contain mutually exclusive answers to avoid double counting across the Democracy and Autocracy indexes. Countries are awarded points based on

11 Mala Htun, “Is Gender like Ethnicity? The Political Representation of Identity Groups,” *Perspectives on Politics* 2, no. 3, (2004).

12 Rein Taagepera and Matthew Shugart, “Description of Electoral Systems,” *Polis. Political Studies*, no. 3 (1997): 114.

13 Polity IV Project, “Political Regime Characteristics and Transitions, 1800–2018 Dataset” (2018).

the existence or lack of institutions satisfying the five categories. The state's autocracy score is then subtracted from its democracy score to determine the composite Polity Score.

Beyond the emphasis placed on institutional strength, Polity also provides vast historical data collection. Polity Scores extend into the early 1800s and are methodically recorded in a central dataset. The availability of historical information combined with Polity's institutional emphasis made the dataset a preferable regime type index in this study.

Through the combination of the Autocracy and Democracy index, Polity demonstrates that "many polities have mixed authority traits, and thus can have middling scores on both Autocracy and Democracy scales."¹⁴ Mixed or hybrid regimes that inhabit the space between democracy and autocracy are referred to in this paper as anocracies. Anocracies manifest under several different labels each with their own set of unique characteristics. One such manifestation of anocracies is competitive authoritarianism. As defined by Steven Levitsky, "In competitive authoritarian regimes, formal democratic institutions are widely viewed as the principal means of obtaining and exercising political authority. Incumbents violate those rules so often and to such an extent, however, that the regime fails to meet conventional minimum standards for democracy."¹⁵ Levitsky's classification of competitive authoritarianism is just one of many subtypes under the hybrid or anocratic umbrella. Although there is debate over the credentials that constitute a hybrid regime, there remains a clear universal trend: hybridity is on the rise.

Ultimately, the Polity Project fulfilled the regime type dataset requirements for this study as it focuses on the institutional elements of democracy, maintains a compilation of historical records, and includes analysis on mixed regime or hybrid traits that are found in anocracies.

The Effect of Physical Architecture on Social Outcomes

Although architecture has gone understudied in the political realm, the significance of design on human interaction has been researched in other fields. Paul Goldberger, a renowned architecture critic and journalist, demonstrates the impact that architecture has on human interaction in his book *Why Architecture Matters*. This 2009 publication illustrates that buildings are more than just glorified shelter. Instead, they have the power to impact people emotionally and intellectually. Fundamentally, Goldberger claims that, "architecture matters because it is all around us, and what is all around us has to have an effect on us. That effect may be subtle and barely noticeable, or it will shake us to the core, but it will never fail to be there."¹⁶ If, as Goldberger claims, all people are susceptible to the intangible implications of architecture, politicians are not immune to the

14 Polity IV Project.

15 Steven Levitsky and Lucan Way, "Elections Without Democracy: The Rise of Competitive Authoritarianism," *Journal of Democracy* 13, no. 2 (2002): 51–65.

16 Paul Goldberger, *Why Architecture Matters* (New Haven: Yale University Press, 2009), xi.

influence exerted by design. Consciously or unconsciously, past governments made architectural choices that continue to impact legislators. Goldberger also recognizes the inherent political nature of architecture: “[buildings] represent social ideals; they are political statements.”¹⁷ From the construction of the 1623 building of the Taj Mahal to the 2016 Olympic stadiums in Brazil, governments have used architecture as a means to deliver political messaging be it of strength, unity, or defiance.

But beyond a “political statement,” I seek to ask if architecture can also be a political reflection, revealing either a state’s regime type in the year of construction or its colonial power.¹⁸ Inquiries into the impact of design have been undertaken in other fields, particularly in the study of educational environments. Anne Taylor and Katherine Enggass’ book *Linking Architecture and Education: Sustainable Design of Learning Environments*, can be viewed as a notable culmination of philosophy, theory, and research intended to understand the intersection of education and architecture. Born from years of informal and formal research, Taylor and Enggass’ text dissects the history of school design and proposes new Classroom models built for the future of education. Early on in the text, they reference the inefficiency of the traditional Classroom style, writing that “schools are moving [away] from the old industrial factory model” because of its inefficiency and harshness.¹⁹ The educational factory model is the most common mental image associated with the American schooling system. Straight rows of rigid desks, all facing forward, with attention directed to a white board and teacher. Dozens of these identical rooms line the hallways of a school, promoting assimilation, uniformity, and conformity. Movement away from “The Factory Model” in the educational sphere is driven by a recognition that the Classroom style remains “passive” and “repetitive” rather than active, inspiring, and engaging.²⁰

A plethora of architecture scholars, including Tapscott, Caine, Locker, and Olson, are all cited as opponents to the educational Factory Model, explaining that it is an inhibitor to, rather than a facilitator of, student learning. The Factory Model, or the educational assembly line, is often linked to “authoritarianism,” “isolation,” and “squareness,” as observed in the 2003 work of Burke and Grosvenor.²¹ Their book, *The School I’d Like*, investigates the outdatedness of different Classroom models, like The Factory Model, and seeks more effective styles designed to represent diverse educational needs.

Taylor and Enggass claim that “the choices we make about our educational environment say something about our values as a nation.”²² If the design of educational Classrooms are indicative of a country’s value system,

17 Goldberger, x.

18 Goldberger, x.

19 Anne Taylor and Katherine Enggass, *Linking Architecture and Education: Sustainable Design for Learning Environments* (Albuquerque: University of New Mexico Press, 2009), 10.

20 Taylor and Enggass, 10.

21 Catherine Burke and Ian Grosvenor, *The School I’d Like: Children and Young People’s Reflections on an Education for the 21st Century* (London: RoutledgeFalmer, 2003).

22 Taylor and Enggass, 31.

architectural choices about political environments must be equally as revealing. After all, why is movement away from the passive educational Factory Model in school Classrooms not mirrored by legislative assembly halls? Is it because passiveness is a desired legislative attribute for certain political regimes? The study of political spaces must be investigated with the same rigor as the educational environment has been, for both structures have the capacity to reveal “our values as a nation.”²³

Past Studies of Architecture and Politics

While minimal research has been conducted on the direct link between architecture and regime type, several studies have found a relationship between seat placement and party defection. Alessandro Saia’s paper “Random Interactions in the Chamber” suggests that a politician’s seating location can have up to a 30% impact on party defection in the Icelandic parliament.²⁴ His study empirically demonstrates that where a politician sits in the legislature can influence where they stand on policy. Although this inquiry does not investigate seating arrangement, understanding that there is a relationship between seat location and party defection contributes to the understanding of larger trends present in this paper: the physical reality can impact legislators.

Kim Dovey, a professor at Melbourne University, is one academic attempting to straddle the two disciplines of politics and architecture, specifically through his analysis of Australia’s Horseshoe legislature. Dovey wrote an essay in the 1999 book, *Framing Places*, that specifically analyzed the Australian legislative assembly and its transition away from the Westminster style. Dovey’s paper, later published in 2019, “Architecture, Power and Parliament: How Do Buildings Shape Politics?” is an updated version of the initial chapter. In that paper, Dovey observes that “architecture is often cast as necessary yet neutral to the life within,” but he posits that the seeming passivity of architectural spaces enables its influence.²⁵ Dovey has been a critical researcher in the field, demonstrating that political architecture changes the nature of discourse in Australia.

Beyond academic sources, this paper was also inspired by a 2019 *Economist* article, titled “Parliaments Get Facelifts; But it is Politics that Really Needs One.” The piece illuminates the research of XML, an architecture firm whose research fundamentally shaped this paper’s outlook on design. The article questions the tendency of regimes to construct or reconstruct legislative buildings in line with historical patterns. For example, it cites the identical reconstruction of the British Parliament during WWII, at the direction of Winston Churchill,

23 Taylor and Enggass, 31.

24 Alessandro Saia, “Random Interactions in the Chamber: Legislators’ Behavior and Political Distance,” *Journal of Public Economics*, Elsevier, vol. 164 (2018): 226.

25 Bret Walker, Chris Seed, George Melalogenis, Ben Wellings, Kim Dovey, Ariadne Vromen, and Ruth Barney, *Lectures in the Senate Occasional Lecture Series, and Other Papers* (Canberra: Department of the Senate, 2018): 72.

as a puzzling manifestation of political allegiance to tradition. The article also raises a principle question: are legislatures designed in the eighteenth century prepared to meet the political needs of the twenty-first? Although that inquiry may appear to fall beyond the scope of this study, the favoritism offered to tradition is particularly relevant to Hypothesis 2 and institutional heritability enshrined by the colonial process. This paper builds on the work of XML by reframing a question they posed about regime type in the present to regime type in a legislature's year of construction. This lens is more indicative of the intentions of the space's construction, rather than an observation of present trends. Although inquiring into the regime type and architecture typology of the present is compelling, XML and the *Washington Post* gloss over the fact that legislative preferences are truly most discernable during a state's Year of Construction. Furthermore, it introduces the variable of British colonialism and legislative inheritance—both elements neglected by XML and popular media sources.

Additional authors have approached political architecture from an institutionalist lens, studying how seating style and design are the “arenas” that define political engagement. One such scholar is Chao-Chi Lin, Assistant Professor at the National Chengchi University in Taiwan. Her paper, “International Spread of Chamber Designs: Their Effects in the Asia-Pacific,” briefly considers the persistence of specific architecture typologies and their relationship to British colonialism—something explored in depth by this inquiry. Another notable contribution to this discipline was made by Charles Goodsell in his paper “The Architecture of Parliaments: Legislative Houses and Political Culture.” Goodsell argues that political “spaces (1) preserve the cultural values of [a] polity over time; (2) articulate contemporaneous political attitudes and values; and (3) contribute to the formation of a political culture.” Although political culture is not directly explored, the values of political spaces and the intentions of design are considered in this piece. Goodsell substantiates the claim that values are reflected in design and reiterates the importance of legislative architecture for political scientists. Goodsell's contribution to the intersecting fields of architecture and policy can also be observed in his chapter “Architectural Power,” in which he explores the soft-power influence exerted by design.

Having thoroughly investigated the influence of institutions on the political process, there remains a two-fold niche that has yet to be explored by the scholarly community: how does politics shape design, and subsequently, how does that design shape politics? This paper tackles the first question—how does politics shape design, by investigating two hypotheses: firstly, the impact of regime type in the year of legislature construction on typology selection, and secondly, the influence of colonialism on architecture type.

Methodology

Country Inclusion

Of the 195 governments investigated, this study located architecture data for all but three states (Eritrea, Holy See, and Palestine), excluding them from all questions of analysis. The 192 remaining states were divided into XML's five architectural classifications, with Classroom being the most common architectural shape (fifty-seven legislatures) and Circle being the least common shape (eleven legislatures).

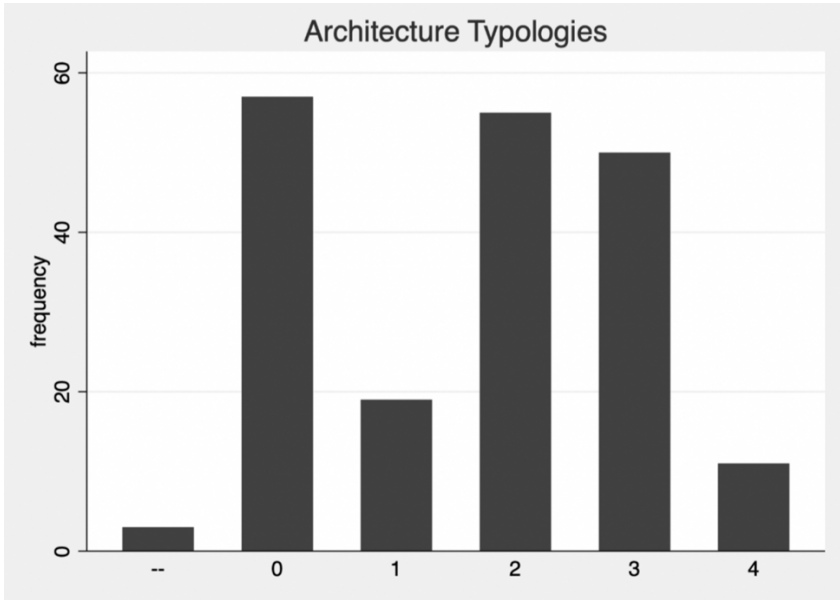


Figure 1.2: Frequency of Architecture Typologies [--(excluded, 3), 0 (Classroom, 57), 1 (Opposing Benches, 19), 2 (Semicircular, 55), 3 (Horseshoe, 50), 4 (Circle, 11)]

Measures of Democracy

In order to address the question of Hypothesis 1—do different regime types adopt certain legislative typologies—authority trend data was collected from the Polity index. As discussed in the Understanding Regime Types section of the Literature Review, the composite polity score is a combined value of a country's autocratic points and democratic points on a 21 point scale (ranging from -10 (full autocracy) to 10 (full democracy), encompassing 0). The polity score utilised by this study was gathered in the legislature's year of construction (YOC). For example, XML recorded the year of Argentinian legislature construction as 1906. Therefore the polity score collected from Argentina was from the year 1906.²⁶

²⁶ If XML recorded a legislature's YOC to be multiple years or a decade, the earliest polity score from the first year of construction was used in the study. For example, the Cameroon legislature is recorded as being built throughout the 1960s and the Polity score included in analysis was 1960. This decision was made to gauge the regime type that initially decided to construct the legislative assembly and the governing individuals that likely contributed to the selection of architectural design.

The study utilizes Polity 4 scores in order to maintain consistency as the more recent Polity 5 dataset only covers the years of 1946 to 2018. Accessing years prior to 1946 was absolutely fundamental to legislature YOC data since the construction of legislative assemblies often pre-dates the collection of Polity 5 data. Polity notes that within their own index, rankings from 6 to 10 are democracies, -5 to 5 are anocracies, and -6 to -10 are autocracies. Polity's regime type threshold was adopted throughout this investigation.

Tracking the Influence of Colonialism

To address the question posed by Hypothesis 2—do colonial legacies affect architectural choices—it was fundamental to record a country's colonial legacy. Understanding, tracking, and standardizing the role of colonialism on architecture trends was achieved through the Issue Correlates of War (ICOW) dataset made available by Paul R. Hense and Sara M. Mitchell. ICOW seeks to “identify colonial or other dependency relationships for each state over the past two centuries” in order to assist scholars in identifying current political trends that may be rooted in colonial legacies.²⁷ Since the construction of legislative assemblies was found to be influenced by colonial dynamics, the ICOW dataset was used to identify how colonial relationships may have shaped construction trends.

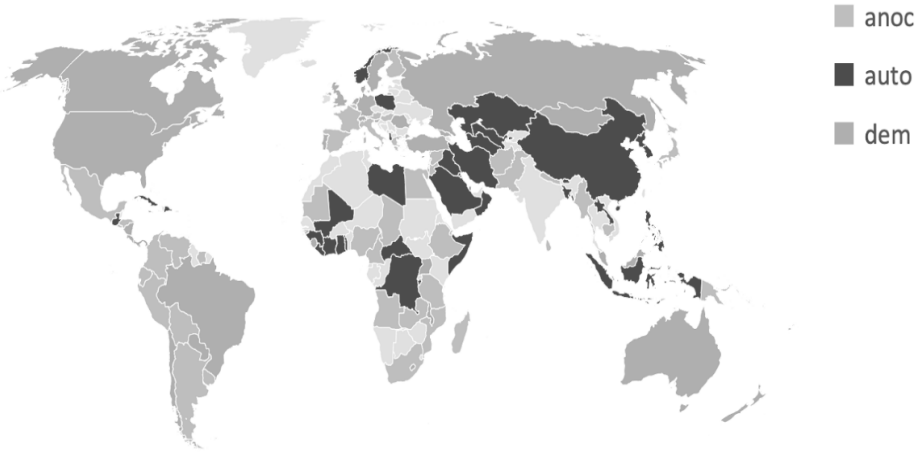
Results

Regional Comparison

Of the 192 states included in analysis, only 118 states possessed an XML year of construction and a Polity score in the year of construction. Ultimately, seventy-four governments (beyond Holy See, Eritrea, and Palestine) were excluded because of missing data or because they were in a period of political transition (Algeria, Andorra, Antigua and Barbuda, Armenia, Azerbaijan, Bahamas, Bahrain, Barbados, Belarus, Belize, Benin, Bosnia and Herzegovina, Botswana, Brunei, Burkina Faso, Comoros, Croatia, Czech Republic, Dominica, Equatorial Guinea, Estonia, Gabon, Grenada, Guyana, Haiti, Iceland, India, Ireland, Kenya, Kiribati, Kyrgyzstan, Latvia, Lebanon, Liechtenstein, Lithuania, Luxembourg, Maldives, Malta, Marshall Islands, Micronesia, Moldova, Monaco, Montenegro, Morocco, Namibia, Nauru, Niger, Macedonia, Palau, Rwanda, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Samoa, San Marino, Sao Tome and Principe, Senegal, Serbia, Seychelles, Slovakia, South Sudan, North Sudan, Tajikistan, Thailand, Tonga, Trinidad and Tobago, Tunisia, Tuvalu, Ukraine, UAE, Vanuatu, Vietnam, Yemen, and Zimbabwe).

²⁷ Paul R. Hense and Sara M. Mitchell, “The Issue Correlates of War (ICOW) Project Supplementary Data Set: Colonial History Data Set,” *Harvard Dataverse*. Harvard Dataverse, March 17, 2011.

Polity Score in YOC



investigation.)

The map above is a visual compilation of Polity score information featuring autocracies, anocracies, and democracies in their YOC. Of the 118 countries that had YOC data, thirty-four countries ranked as democracies (dem), forty-eight countries ranked as anocracies (anoc), and thirty-six countries ranked as autocracies (auto). Admittedly, creating this image is a very artificial exercise as the map is standardized not by a period in time, but by a legislature's year of construction. Although it is an amalgamation of many different years (due to the fact that legislative assemblies have been constructed independently since the 1650s), it displays a key message: legislatures are not exclusively built by democracies.

Figure 1.4 demonstrates that the vast majority of regime types responsible for legislature construction were actually anocracies and autocracies. Although there is an assumption that only democratic states build legislative assemblies, YOC polity scores suggest that YOC democracies are actually the minority of states responsible for the construction of legislative assemblies. Understanding if certain regime types and former British colonies in YOC express a preference for architecture typology may help scholars understand the intentions of different design spaces.

Hypothesis 1:

Hypothesis 1 posits that a country's regime type in the legislature's year of construction, operationalized through the polity score, influences the selection of legislative architecture typology. Based on the assumption that democracies desire debate, opposition, and engagement, whereas autocracies value conformity,

appeasement, and power centralization, Hypothesis 1 theorizes that democratic and autocratic systems are more likely to select legislative chambers that have enshrined their political values into the design of legislative halls. Initially, this paper speculated that the two extremes, Classroom and Circle, would be related to lower polity scores and higher polity scores, respectively. This was based on the alignment of architectural power dynamics with the implicit desires of the regime types responsible for construction. Indicators like eye contact, location of power concentration, and ease of political exchange supported this initial theory as the Circle system seems the most likely to facilitate democratic values while Classrooms seem to preserve the desires of autocracies.

After running a t-test for each political system, two trends related to Hypothesis 1 emerged. In line with the initial theory, Classrooms were correlated with statistically lower polity scores, denoting trends of anocratic and authoritarian regimes. The mean polity score in the year of construction for Classroom states was significantly less (-5.105128***) than the mean YOC polity score for all other architecture types. Ultimately this suggests that anocratic and autocratic regimes (or states with lower polity scores) in the YOC are more likely to build Classrooms.

Classroom		
VARIABLES	Mean PSYOC	Observations
Other (0)	1.705128 (0.784699)	78
Classroom (1)	-3.4 (0.865136)	40
Difference	5.105128*** (1.259542)	
Total		118

The causal mechanism for states with lower polity scores flows from the theory that anocratic and autocratic states desire similar degrees of apathy and conformity. Governments seeking to discourage dissension, often autocratic or anocratic states, may intentionally construct spaces that preserve unchallenged authority. It seems likely that governments hoping to minimize disagreement intentionally design passive systems featuring a lecture hall and imbalance of power. Some of the most notable authoritarian Classroom countries

include Russia, China, and North Korea; however, Classrooms appear in many YOC anocratic states like El Salvador and Djibouti as well. The frequency of both the Classroom style (n=57) and the magnitude of anocratic/autocratic YOC governments (n=84) should remind scholars that not all regimes desire to build a substantive democratic legislature. Instead, certain states may desire the construction of a passive legislature that enables the presentation of democracy whilst preserving a central agenda.

Surprisingly, a second relationship was unearthed through Hypothesis 1 between higher polity scores and the Opposing Bench Style. The mean polity score in the year of construction for states with Opposing Benches was significantly greater (6.405405**) than the mean YOC polity score for all other legislative architecture typologies. Although the sample size of Opposing Bench regimes with YOC data is small (n=7), the significant correlation still suggests a relationship between democratic regimes in the year of construction and the Opposing Bench typology. The mean Opposing Bench Polity score in YOC was 6, a value that falls into Polity's classification of a democracy.

Opposing Benches

VARIABLES	Mean PSYOC	Observations
Other (0)	-0.405454 (0.648867)	111
Opp. Bench (1)	6 (1.85164)	7
Difference	-6.405405** (2.630353)	
Total		118

The emergence of this relationship motivated the question of causation: are democratic governments actually more inclined to build opposing bench systems? The Opposing Bench style does contain an element fundamental to democracy: opposition. Unlike Classrooms that seek assimilation and amalgamation, the Opposing Bench system is predicated on the exchange of different ideas and debate. Perhaps, the encouragement of political disagreement makes the system attractive to governments hoping to enshrine or protect the role of opposition in a democratic political system. The existence of fair elections

and a strong opposition party seems fundamental to the Opposing Bench system, since it is founded on the idea of “crossing swords.”²⁸ Therefore, Opposing Bench systems may be attractive to regimes that desire competitive elections and open recruitment of political representatives (both elements tracked by Polity) because conflict is embedded in their design. The adversarial nature of the Opposing bench system is fulfilled by democratic states that protect political conflict in design. Therefore, leaders hoping to introduce a competitive democracy may express a preference for the OB style.

However, it should be noted that a high polity score is not necessarily indicative of a legislature’s productivity or degree of collaboration. For example, the adversarial nature of the Opposing Bench system may produce divisive partisanship even within institutions that are democratic. Further research needs to be conducted into the relationship between the number of political parties and the Opposing Bench system to understand if it is more likely to produce a two-party system.

Hypothesis 2:

Hypothesis 2 sought to identify trends of legislative architectural heritability for former colonial countries with a clear trend emerging across Opposing Bench states: British colonialism. A relationship to UK colonialism seems to be a predictor of the Opposing Bench system in all but two cases. Of the nineteen countries that use the Opposing Bench system (Antigua and Barbuda, Bahamas, Barbados, Belize, Botswana, Canada, Czech Republic, Grenada, Guyana, Jamaica, Namibia, Saint Kitts and Nevis, Singapore, Sri Lanka, Suriname, Trinidad and Tobago, Uganda, Zimbabwe, and the United Kingdom), the Czech Republic and Suriname are the only two states without colonial ties to the UK. Namibia and Singapore possess more complicated relationships to UK colonialism, as ICOW reports that Namibia was most recently colonized by South Africa and Singapore by Malaysia; however, both South Africa and Malaysia are former UK colonies, connecting both Namibia and Singapore to the British colonial lineage.²⁹ Since the legacy of UK colonialism can be traced to all but two of the descendant Opposing Bench countries, it is likely that Opposing Benches are in part shaped by colonialism. With this in mind, legislative architectural institutions may be hereditary and assumed through colonial relationships, presenting another potential causal mechanism for typology selection. Therefore, construction of legislative assemblies may be an imitation game rather than a series of deliberate choices about the most effective or democratic typology.

The findings from Hypothesis 2 also enable the refinement of the democracy and Opposing Bench discovery from Hypothesis 1. As discussed in the regime type inquiry, the mean YOC polity score for OB states was

²⁸ Dovey, 88.

²⁹ It should be noted that South Africa and Malaysia do not use the Opposing Bench system; instead they utilize the Horseshoe shape that is seen as a bridge between the Westminster style and the Semicircle.

statistically higher than the mean YOC polity score for all other architecture types. Curiously, however, only seven of the thirty four YOC democracies built an Opposing Bench system. This irregularity indicates that only certain YOC democracies, rather than all, pursued the OB system. What unifies the YOC democratic states that expressed an OB preference is their former colonial power: the United Kingdom.

This finding—that the only subtype of YOC democracies to build OB systems are former UK colonies—supports the assertion that British colonialism influences typology selection. Moreover, it qualifies the regime type correlation from Hypothesis 1 that observed higher polity scores in OB systems, for the Polity Score discrepancy may also be a byproduct of institutional inheritance and colonialism. Instead of YOC democratic regimes constructing OB systems out of intentionality (i.e., because YOC democracies believe that the OB style best satisfies their needs as a democracy), former UK colonial states may unintentionally inherit both strong political institutions and the Opposing Bench system from the UK. Since a country's polity score is chiefly determined by institutional presence, UK colonial involvement in local governance may have strengthened the democratic elements of a country needed to improve a country's YOC polity score. As such, colonialism may be the causal mechanism driving both typology selection and YOC polity score as the OB architecture typology is inherited along with a collection of established UK democratic institutions that drive up the YOC Polity score.

Since the sub-type of YOC democracies that constructed OB systems are defined by British colonialism, the findings from Hypothesis 2 qualify the results from Hypothesis 1. British colonialism may dually impact OB systems: first through typology selection, and second through the increase of YOC polity scores as a byproduct of remnant UK political institutions.

Other Findings:

Contrary to the initial Circular theory from Hypothesis 1, there was no regime type relationship found between higher polity scores and the Circular style. Since the Circular style is only found in eleven countries, it seems to be more of an outlier than a common denominator of democracy. Yet, one interesting trend did emerge in the Circle categorization, that of size.

Curiously, there seems to be an unofficial numerical ceiling on Circular legislatures. Of the eleven states that use a Circular style, none surpass 150 total members. The three smallest Circular legislatures, Micronesia, Saint Lucia, and Liechtenstein, house twenty five or fewer representatives. The three largest circular legislatures, Jordan, Senegal, and Uzbekistan, all rest at exactly 150 seats. Perhaps, this threshold represents a limitation of the architecture style. The attributes that would likely motivate the construction of a Circular legislature, for example, preserving closeness and proximity to a hearth region, may be obstructed when assembly chambers increase in size. In order to gain many of its

benefits (eye contact, fluid debate, closer congregation) there may exist a limit to the number of people contained in a Circular space. Perhaps that unofficial number rests at or around 150 seats, where accommodating more representatives begins to strain the intentions of a circular design.

Inquiring into the physical limitations of each typology is a field that must be further studied since population size and the corresponding legislature size may influence typology selection. Countries with larger populations may require a greater number of political representatives, forcing the corresponding state legislature to demand additional space. That need for space may play a role in legislative architecture decision making. For example, states in need of larger chambers may be disincentivized from selecting the Circular style if the benefits of Circular congregation are exclusively limited to assembly halls with fewer than 150 legislators. Instead, large regimes may select the Classroom style (which featured an average of 231.3 representatives compared to the average 85.45 seats in a Circular style), because Classrooms are physically able to accommodate more representatives. Therefore, a potential confounding variable could be the size of legislative assemblies, as the number of representatives may encourage or constrain typology selection.

Finally, there was also no statistical significance associated with the Horseshoe or Semicircular arrangement for both Hypothesis 1 and Hypothesis 2.

Discussion

This review of physical architecture reveals firstly that diverse regime types are responsible for legislature construction. Contrary to a widely held assumption that legislative assemblies are constructed exclusively by democracies or by states seeking to transition to a democracy, plenty of anocratic and autocratic governments also build places of political congregation. In total, only 28 % (n=34) of YOC countries had polity scores classified as a democracy. Autocratically constructed legislatures comprised 30% (n=36) of the data sample. However, anocracies were the most common regime type, representing 40% (n=48) of all constructors. This variation demonstrates that political assemblies are not built exclusively by or for democracies. Instead, anocratic and autocratic regimes frequently construct legislatures, perhaps with markedly different intentions in the design process than democratic regimes.

This study also highlights the false perception of neutrality in the construction process. Although it may be appealing to assume that all legislatures are constructed from a place of objectivity, design is far less impartial. The change in typology selection across polity scores, as observed in Hypothesis 1, affirms that regime types make different choices in the legislature design process.

As seen in Hypothesis 2, British colonialism also seems to inform typology selection, underscoring the imitation game inherent in political architecture. From Botswana to Jamaica, the OB style appears almost exclusively in former British colonies, revealing the relatively arbitrary nature of legislature

selection. The use of the word arbitrary should not imply unintentionality (for UK colonies typology selection is *intentionally* motivated by colonialism), rather it is to suggest that motivating factors may have nothing to do with the desires of a new government to build democracy.

Although the colonial lineage established through Hypothesis 2 seems to denote that legislatures express a preference to tradition, the inflexibility or rigidness of political institutions may actually be attributed to legislative “stickiness.” Legislatures are enshrined with political meaning and grant legitimacy to new governments through repetitive symbolism. This symbolism contributes to cultural narratives that further entrench a resistance to change in physical spaces. For example, seeing the American President in the Oval Office or the British Prime Minister living on Downing Street grants present individuals legitimacy through the reenactment of traditional practices. Desiring historical legitimacy can be observed in the past construction taken by OB systems that had just secured independence from the UK. Building institutions that mimic those of the UK may help new governments obtain legitimacy.

Moreover, after a legislature’s initial construction, the physical structure becomes increasingly difficult to modify. There is seldom an opportunity for change both as a byproduct of high monetary cost and the re-enactment of new political legitimacy built into the very foundations of a building (and regime). However, states that are able to find time to modify or reconstruct a legislative space (either out of desire or necessity) have the opportunity to become “unstuck” as the process disrupts legislative inheritance. The sticky versus unstuck juxtaposition can be observed in the divergent architectural experiences of two former UK colonies, Canada and Australia.

Legislative stickiness can be seen in the Canadian legislature that has employed the Opposing Bench system since it achieved independence from the UK in 1867. The retained Opposing Bench granted the immediate post-colonial government legitimacy through mimicry, but it has since acquired symbolic meaning to Canadians, rendering redesign a challenging endeavour.

On the other hand, Australia employs a Horseshoe formation that was formed during two distinct renovation periods in Australia’s legislative history. Originally, the parliament in Melbourne used the Opposing Bench style, but it was abandoned in the interim provisional parliament. Due to high costs and the legitimacy dilemma, legislatures seldom engage in reconstruction or redesign. However, Australia’s need to relocate from the first Parliament in Melbourne forced conscious design choice and facilitated a period of typology change. The “Australia House of Representatives Book” explains that “during the planning stages” of legislature re-design “the decision was taken to depart from the Westminster style Chamber.”³⁰ Although the Australian Horseshoe still possesses the rigid and straight lined sides of the Opposing Bench system, the legislature became unstuck during the revision period, offering a moment of

30 Parliament House, Canberra, *House of Representatives Practice* (2nd Edition), Parliament of Australia, Commonwealth Parliament House (2019): 149.

critical consideration that permitted variance away from the Opposing Bench style. There has yet to be a period of questioning or intentional modification within the Canadian system, potentially entrenching the stickiness of Canada's parliament. Without electing or being compelled to redesign their legislature, Canada remains in the Opposing Bench system, a reality that starkly contrasts Australia's experience of reinvention.

Limitations

This investigation was designed predominantly as a preliminary analysis investigating the relationship between architecture and regime type rather than as a comprehensive report on all elements of political architecture. Firstly, the analysis was limited to states that possessed both an XML architectural classification, as well as a Polity score in the Year of Construction. This eliminated several states from consideration and reduced the available sample size.

Inquiring into the relationship between physical architecture and policy is far from complete. When running t-tests and regressions in this analysis, many potential confounding variables were not included. For example, the potential influence of factors like geographic regions, individual architects, time period, or global architecture trends were not mitigated in this study. The YOC correlation that exists may be a byproduct of other factors, for example, higher polity scores in the OB system may be a result of UK institutions rather than a democratic regime type desire to build the OB system. Furthermore, popularity of the Classroom style may be a byproduct of regional trends or size needs that may be conflated with intentional regime type selection. Subsequent studies should locate nuance within these trends through the inclusion of absent indicators of interest.

As mentioned in the literature review, there are two neglected questions in this field: How does politics shape design, and how does that design subsequently shape politics? This paper only addresses the first question—how does politics shape design?—through an inquiry into colonialism and regime type. The results lend themselves as evidence that the second question—how does that design subsequently shape politics—must be addressed in future studies.

Conclusion

This article examined the motives of legislative architectural typology selection through a dual hypothesis framework. This was achieved through an investigation into regime type (Hypothesis 1) and an examination of British colonial lineages (Hypothesis 2).

In Hypothesis 1, the study discerned two regime trends: firstly, states with the Classroom architecture style feature lower Year of Construction polity scores than all other architecture typologies, and secondly states with

the Opposing Bench system display higher YOC polity scores than all other typologies. These two findings suggest that regime type matters to legislative architecture construction. The findings from Hypothesis 2—that colonialism is another influencer of Opposing Bench selection—complicates the Opposing Bench relationship discovered in Hypothesis 1. The heritability of both strong democratic institutions and Opposing Benches in former UK colonies signals that there may be an imitation element in legislative architecture. Such mimicry may be driven by a desire to secure legitimacy for new governments, avoid high costs associated with reconstruction, or preserve tradition. Nevertheless, these three attributes produce “sticky” architectural systems that can be incredibly resistant to change.

While it may be appealing to view design as objective, it is inaccurate to suggest that the selection of legislature typology is pursued from a place of neutrality. Instead, this inquiry posits that design is both informed by and a reflection of political desires. When reflecting on the Semicircles of Greek antiquity or Cesare Maccari’s depiction of the Roman senate, political spaces have always exerted influence over discord. But the persistence and inheritance of architectural institutions prompts a fundamental question: can (or better yet, should) legislative styles designed in the past be expected to satisfy the diverse political needs of the present?

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Appendix

Classroom		
VARIABLES	Mean PSYOC	Observations
Other (0)	1.705128 (0.784699)	78
Classroom (1)	-3.4 (0.865136)	40
Difference	5.105128*** (1.259542)	
Total		118
Opposing Benches		
VARIABLES	Mean PSYOC	Observations
Other (0)	-0.405454 (0.648867)	111
Opp. Bench (1)	6 (1.85164)	7
Difference	-6.405405** (2.630353)	
Total		118
Semicircular		
VARIABLES	Mean PSYOC	Observations
Other (0)	-.3253012 (.7570044)	83
Semicircular (1)	0.6857143 (1.170198)	35
Difference	-1.011015 (1.391528)	
Total		118

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

Horseshoe		
VARIABLES	Mean PSYOC	Observations
Other (0)	-.5568182 (0.7222501)	88
Horseshoe (1)	1.533333 (1.296976)	30
Difference	-2.090152 (1.450088)	
Total		118
Circular		
VARIABLES	Mean PSYOC	Observations
Other (0)	-.2142857 (0.6467955)	112
Circular (1)	3.5 (3.030402)	6
Difference	-3.714286 (2.879209)	
Total		118

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1