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## Organizational wrongdoing, boundary work, and systems of exclusion

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**Organizational Wrongdoing, Boundary Work, and Systems of Exclusion: The Case of the  
Volkswagen Emissions Scandal**

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# **Organizational Wrongdoing, Boundary Work, and Systems of Exclusion: The Case of the Volkswagen Emissions Scandal**

## **Abstract**

The Volkswagen (VW) emissions scandal was one of the largest examples of organizational wrongdoing in corporate history, costing the firm immense damage to its reputation and over \$33 billion in fines, penalties, financial settlements, and buyback costs. In this paper, we draw on the concept of boundary work to provide insight into the causes of wrongdoing at VW. Supplementing other work on the scandal, we show how the ways in which boundaries became established in the organization resulted in an internal context that defined “in” and “out” groups, normalized certain behaviors, and limited communication across intraorganizational boundaries. This allowed wrongdoing to not only become established but also to go unchallenged. We provide contributions to broader understandings of organizational wrongdoing and to the temporal unfolding of boundary work by theorizing how a combination of cognitive, horizontal, and vertical boundaries can create an infrastructure of organizational design that permits organizational wrongdoing, prevents it being challenged, and ultimately normalizes it in everyday activities.

**Keywords:** Wrongdoing, Boundary Work, Cognitive Boundaries, Organizational Design, Volkswagen scandal, Dieselgate.

## **Organizational Wrongdoing, Boundary Work, and Systems of Exclusion: The Case of the Volkswagen Emissions Scandal**

Organizational wrongdoing is the (co-) organized behaviour engaged in by individuals, groups and organization that violates laws, transgresses industry or professional codes, and/or results in the breach or neglect of social norms or ethical rules (Palmer, Smith-Crowe & Greenwood, 2016). Scholars, investigative journalists, and organizational whistle blowers have highlighted the consequences for individuals, businesses, and society of organizational wrongdoing across a range of empirical settings. Much of this work has positioned wrongdoing as an abnormal event attributable to either a single person or very small number of individuals working together (e.g., Schnatterly, Gangloff & Tuschke, 2018; Van Rooij & Fine, 2018; Clemente & Gabbioneta, 2017; Lavena, 2016; Efron, Brian & O'Connor, 2015; Gabbioneta, Greenwood, Mazzola, & Minoja, 2013; Kish-Gephart, Harrison & Treviño, 2010; Starbuck & Milliken, 1988). A second stream of research has viewed wrongdoing as a natural, even predictable, outcome of organizational arrangements (Fleming, Zyglidopoulos, Boura, & Lioukas, 2020; Palmer *et al.*, 2016; Dempsey, 2015; Balch & Armstrong, 2010; Sims & Brinkmann, 2003; Rosa & Vaughan, 1997). It is the latter perspective that we adopt here. In so doing, we align with Fleming *et al.*'s (2020) call for research into how wrongdoing becomes normalized and systematized in organizations.

Taking a position that wrongdoing can emerge as a consequence of organizing forces us to move beyond individual motivations and uses of personal power bases to think more broadly about organization designs that allow such activities to emerge and, crucially, often go undetected for long periods. While work has pointed to the importance of organizational design for our understanding of wrongdoing (e.g., Gaim, Clegg & Cunha, 2021; Clemente & Gabbioneta, 2017; Palmer *et al.*, 2016; Gabbioneta *et al.*, 2013; Kish-Gephart *et al.*, 2010), insight into how it emerges and can become established remains nascent. Our work furthers understanding in this area through an examination of the 'Dieselgate' scandal at Volkswagen (VW), the largest car manufacturer in the world (*The Economist*, 2021; Statista, 2021). The wrongdoing that emerged following VW's admission in September 2015 to the use of software installed in cars – the so-called "defeat device" – to fake emission test results in over 11 million cars worldwide constituted one of the largest corporate scandals in history. The purpose of our paper is to assess how organizational design through the purposeful creation and maintenance of internal organizational boundaries contributed to the malfeasance that took place at VW.

Our work is founded on data from a rich autoethnography supplemented by corporate documents and media coverage. In so doing, we seek to supplement other work on this scandal that has pointed to the ways in which organizational culture, power inequalities, and hierarchical arrangements

influenced the emergence of corruption at VW (see, for example, Gaim et al., 2021; Clemente & Gabbioneta, 2017; Ewing, 2017; Cavico & Mujtaba, 2016; Rhodes, 2016). We show how boundary work contributed to an internal context that defined “in” and “out” groups, normalized certain behaviors, and limited communication across intraorganizational boundaries. This allowed wrongdoing to not only become established but also to go unchallenged.

## **THEORETICAL FRAMEWORK**

As our understanding of organizational wrongdoing has developed, so it has become understood that power structures, administrative systems, and culture can lead not just to effective ways of working but also to negative outcomes (Palmer, 2013). Understanding how organizational structures can lead to malfeasance, however, remains nascent (Palmer *et al.*, 2016).

### **Organizational Design and Wrongdoing**

Structures in organizations are intended to provide organizational actors with formal and informal guidance regarding how to act. They enable organizations to function and provide an orientation for decision-making. Intrinsic to such arrangements are distributions of authority and power that help determine how employees should act, particularly when they are confronted with problems that they cannot solve (Palmer, 2013). Formal authority structures ensconced in hierarchical arrangements establish a chain of command allowing subordinates to pass key decisions to a more senior official. So far there is limited work on how such hierarchical arrangements influence the emergence of wrongdoing (Brahm, Parmigiani and Tarziján, 2021; Langley, Lindberg, Mørk, Nicolini, Raviola, & Walter 2019; Lavena, 2016).

A further important feature of organizational designs is the ways in which work is divided among subunits. This necessitates the establishment of effective integrating and communication devices that allow information to flow effectively. The ways in which information is either shared or not shared will likely shape decision-making processes and subsequent courses of action (Palmer, 2013; see also Schnatterly et al., 2018). Further, as individuals or groups accrue power, so they develop opportunities to contour organization designs and information flows to suit their own interests. This can lead to tensions over appropriate courses of action, which, as Gaim et al. (2021) showed in their study of the VW Dieselgate scandal, can create a situation in which sub-unit objectives are ‘achieved’ through impression management rather than substantive performance outcomes.

Work linking design arrangements to organizational wrongdoing has largely centered on two explanations. First, research that defines wrongdoing as an abnormal activity has largely built on rational choice theory with actors described as engaging in mindful and rational actions in the pursuit of some form of self-interest (e.g., den Nieuwenboer, da Cunha & Treviño, 2017; Anand, Ashforth,

& Joshi, 2004). The second perspective views wrongdoing as an inherently normalized phenomenon that emerges as an outcome of administrative systems, situational social influences, and power structures (e.g., Fleming *et al.*, 2020; Palmer, 2012). Here, wrongdoers are not viewed as engaging in mindful and rational deliberation; rather, wrongdoing is linked to the social context in which they operate (Palmer, 2017; Palmer & Maher, 2006; Ashforth & Anand, 2003). We build on this emerging stream of work by drawing on the concept of boundary work to further understanding of how such organizational arrangements develop and their potential consequences.

### **Boundary Work**

Boundary work constitutes “the purposeful, reflexive effort of individuals, collective actors, and networks of actors to shape a social boundary” (Lawrence & Philips, 2019: 158). Boundary research has traditionally focused on studies of everyday work in order to reveal formally understood roles and jurisdictional boundaries that may be blurred or reinterpreted as they are enacted in situations where collaborators are dependent on each other to accomplish their task (e.g., Griernyn, 1983). Based on this understanding, boundary work has been seen as one of the key means to legitimize actions. As organizational boundaries become socially accepted, they can become institutionalized to the point that they are very difficult to change or erase (Zerubavel, 1993). As research into boundary work has evolved, so it has become understood that boundaries are often co-constructed outcomes of organizational insiders and outsiders (Bechky, 2012). Such work is intentional (Langley *et al.*, 2019) and leads to the creation and/or legitimization of particular practices. Thus conceived, boundary work has material effects on the distribution of power and privilege (Zietsma & Lawrence, 2010). It also determines whose interests matter.

Langley *et al.* (2019) described three categories of boundary work. Competitive boundary work involves mobilizing boundaries to establish advantage over others. In configurational boundary work, individuals manipulate patterns of differentiation and integration among groups in ways that bring some activities together and keep others apart. Finally, collaborative boundary work describes the alignment of boundaries to enable collaboration among subunits. In each case, boundary work involves ongoing, situated activities that require social interactions and practices among various actors over time (Gieryn, 1996; Gieryn, 1983). Thus, boundaries not only differentiate groups, but they also bring together individuals explicitly and implicitly (Berthold, Helfen & Wirth, 2021), often in the guise of organizing for effective and efficient operation.

Building on the work outlined above, we consider boundary work as having the potential to offer novel insights into the ways in which organizational design can lead to ‘normalized’ wrongdoing. While we know that boundaries act to include and exclude particular actors, the links with organizational wrongdoing remain underexplored. Langley *et al.* (2019) and Berthold *et al.* (2021)

are among those who have recently suggested that the boundary perspective constitutes a potentially useful lens for studying organizational wrongdoing by highlighting intangible elements of organizational design as well as emphasizing the roles of those in boundary construction. Such work can also allow us insight into who is involved in decision making, who is excluded, what is prioritized, and how associated activities can emerge and become established.

## METHODS

### Data Collection

Data for this case study are drawn from three main sources (see Table 1). Following Hughes and Pennington (2017), the case principally rests on an autoethnography based on the first author's experiences and personal diaries kept while she worked at VW's headquarters between 2013 and 2018, a period that included the emissions scandal being exposed and VW's subsequent response. The first author worked initially as an apprentice while completing her undergraduate degree, gaining experience across six departments at the company's headquarters in Wolfsburg, Germany. From January 2017 until September 2018, she worked full-time as a manager in the Human Resource-Marketing Department. This resulted in her having regular interactions with people from across the entire headquarters. The autoethnography was constructed from personal diaries and calendars that documented the first author's daily activities, observations, moods, and opinions.

Our second source of data comprised documents, including VW's Annual Reports (ARs) from 2008 to 2020; press statements; electronic documents on the company's website; and written accounts relating to the scandal. The year 2008 was chosen as the starting point as it marked the introduction of the VW "Mach 18" strategy, a ten-year strategy intended to make VW the world's leading car manufacturer by 2018. Particularly useful were the ARs from 2015 and 2016 that described the impact of the scandal and the resulting planned changes, and the reports from 2017 to 2020 that documented the implementation of these processes.

Third, we collected an extensive array of media data. To mitigate the ideological biases that characterize newspapers in particular, we drew on the four biggest German newspapers (*Bild*, *Süddeutsche Zeitung*, *Frankfurter Allgemeine Zeitung* and *Handelsblatt*) and the British newspapers *The Guardian* and *The Times* from September 2015 to September 2020. The six newspapers collectively allowed a relatively balanced approach to coverage of the scandal. Two TV documentaries, one from Netflix titled "Dirty Money" and the other from Arte called "Dieselgate - Die Machenschaften der Deutschen Automobilindustrie" were also analyzed to draw additional insights.<sup>1</sup>

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<sup>1</sup> The Annual Reports were produced in English; all German language documents were translated by the first author.

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Insert Table 1 about here  
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## **Data Analysis**

In analyzing the data, we followed a theory building process moving between the data and the literature. Tables 2 and 3 provide an overview of how we moved from the raw data to our emergent theoretical themes. As autoethnography is both process and product, it is important to describe our data analysis in detail following a constructive (Feldman, 2003) and evaluative (Richardson, 2000) approach to develop confidence in the robustness of the data and the analysis. In the first phase, the autoethnography was read by the co-author and emergent themes that seemed empirically and/or theoretically important were highlighted and discussed. This allowed further elaboration of the themes to create plausible connections between the data, theory, and common sense (Langley, 1999). This process was repeated two further times, allowing us to challenge, refine and develop our understanding of what happened, and why.

To establish the main themes, we built on the events that emerged as significant to the development of Dieselgate that were associated with design elements of the organization. Following an interpretive research tradition, we went back and forth between the data, the literature and the emerging structure of theoretical themes and theoretical implications by reading and rereading the material (de Rond & Lok, 2016; Mantere & Ketokivi, 2013; Miles & Huberman, 1994).

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Insert Table 2 about here  
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Insert Table 3 about here  
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## **FINDINGS**

Our findings below show the ways in which boundaries were actively created and reinforced resulting in vertical and horizontal divisions between groups across the organization. Moreover, boundaries conditioned how people thought and acted, allowing value-impregnated norms to emerge and become established, and actions going unchallenged. The first author's observations and experiences, that were central to our emergent understanding of the antecedents of the scandal, are identified in the findings through the usage of examples described in the first person singular. We established the key themes that emerged in a chronological order looking at the organization in the lead up to Dieselgate before focusing on how the organization responded to the scandal. This post-scandal period was important as it revealed the conclusions of what VW's leadership felt caused Dieselgate and what it needed to do to overcome what was an existential crisis at the firm.



## **Pre-Scandal**

### **Growth**

From 2007, when Martin Winterkorn became CEO, the quest to become the world's biggest automaker was overtly expressed internally, in public pronouncements, and in VW's various strategy documents and annual reports. A letter to shareholders in 2011 started by declaring, "We clearly exceeded the ambitious goals that we had set ourselves for 2011". It then went on to detail records that had been broken and how much closer the organization had come to attaining its goal:

With vehicle deliveries of 8.3 million – over one million more than in the year before – we again substantially outperformed the overall market. Our sales revenue increased by 25.6 percent to €159.3 billion... a new record (AR 2011, p.20-21).

The desire for continual growth was placed at the center of the firm's strategy resulting in an emphasis on recruiting only the best students and graduates and placing an expectation of high levels of employee performance in order to become the world's biggest automaker. The question of how sustainable this growth was and how this overarching goal would be interpreted by managers and employees was not raised. On the contrary, the mantra of growth was explicitly communicated by leaders at all levels in the day-to-day running of the organization. In VW's official communications, from 2008 onwards, the emphasis on growth was a persistent feature, exemplified by this quote from the Strategy 2018 document: "the goal is to increase unit sales to more than 10 million vehicles a year" (AR 2013, p. 49). In this environment, unsurprisingly, behaviors that led to growth were lauded. These were quickly internalized by new recruits, as the first author experienced. Importantly, with growth idealized and rewarded, competition between subunits rather than cooperation was normalized, something that served to harden internal boundaries. Thus, not only was their pressure to achieve high levels of growth within subunits, scrutiny across subunits was diminished, two conditions that raised the likelihood of wrongdoing taking place.

### **Pursuit of Perfection**

Aligned with the constant striving for growth was a pronounced emphasis on the pursuit of perfection in all activities. Communication through the organization extolled the virtues – and importance – of achieving engineering mastery, not about how difficult something was to create or how many attempts were required. Incentives were tied to the achievement of high levels of performance; problems along the way were expected to be (re)solved. The way in which this striving for extremely high levels of performance became embedded in the culture at VW was demonstrated when Winterkorn was asked to explain what the term "dedication" meant to him:

I discovered early on that it is only possible to achieve great things with genuine dedication and passion. Dedication is first and foremost an attitude: it means giving your all, whether you are an athlete, a scientist, or an engineer. I have the utmost respect for people who show

such dedication...People whose heart is not truly in their work tend to settle for less. Dedication makes people go the extra mile, encourages them to consider how to make things even better. Dedication is a relentless driving force, it's not an easy option—but it does leave you with a profound feeling of contentment (AR 2012, p. 29).

This quote is highly illustrative in that it aligns the pursuit of “great things” with a dedication to VW; by contrast, those who are not dedicated will “settle for less” and are clearly not valued. The emphasis on dedication underpinned the demands for extraordinarily high levels of performance that became normalized across VW. Managers across the organization frequently reiterated the importance of “perfection”.

Looking at my own experience, for each semester I would hand in my marks achieved at the university to the Human Resource department so that my progress could be monitored. I, and my colleagues, felt pressure to perform at a very high level. It was also made clear to me that excellence was not considered to be a team characteristic but rather was developed through the creation of individual performance goals. This was also developed by creating competition among different individuals and groups. A consequence of this was that communication between managers of different groups was kept at a minimum to not share potential sources of subunit advantage that were perceived as being advantageous to a manager's career prospects. The messages that I received, with the emphasis on individual performance, were aligned with this exhortation that appeared in the 2013 AR (p.49):

We will only successfully meet the challenges of today and tomorrow if all employees – from vocational trainees through to senior executives – consistently deliver excellence to ensure the quality of the Volkswagen Group's innovations and products for the long term and at the highest level. Outstanding performance, the success that comes from it and participation in its rewards are at the heart of our human resources strategy.

The pursuit of perfection put extreme pressure on employees at all levels, leading to rivalries and a deliberate avoidance of communication between members of different subunits. Again, this created a silo mentality in which solutions were individually derived and implemented. In addition to the lack of direct forms of communication, there were other signs that clearly showed the divisions between each subunit. Every department created its own environment with visual differences emphasized by different office layouts and decor. When I visited other departments, there would be little acknowledgement of my presence much less a friendly greeting: it seemed I was entering hostile territory. It is illustrative that when I could convince myself to contact another department, I much preferred email or phone rather than going to visit somebody across the invisible barriers that I perceived.

In the quest for growth, innovation was seen as vital. The VW approach was that innovation emerged from discipline, dedication, and the relentless pursuit of perfection. Mistakes got identified, but they

were also seen as a sign of weakness. The fear of making mistakes permeated the organization and was reinforced in very public ways. For example, heads of department would be expected to give weekly updates and would be publicly chastised if the performance of their subunit had fallen below expectations. In this way, competition between groups was actively maintained and deliberately managed further strengthening the boundaries among different subunits.

If mistakes took place employees would generally not discuss them. The fear of being publicly criticized or demeaned by colleagues was extreme. Successful managers were viewed as not making mistakes. Everyone knew how Winterkorn would chastise employees if the quality of a car part was deemed inadequate. Such demands for perfection allied to a fear of failure further increased the likelihood of malfeasance. This was supported by a report in *Süddeutsche Zeitung* a German newspaper, in 2018, that emphasized the ways in which the ideals that were established at VW permeated the organization and were not questioned, let alone challenged: Under the headline “The silent fulfillment of duty without objection” the newspaper described how employees at VW “would quietly fulfill their duty without questioning what they needed to do. Three years after the scandal this culture, based on following authority and practicing obedience has not yet been overcome” (*Süddeutsche Zeitung*, 2018).

### **Homogeneous Thinking**

The autoethnography and the documents clearly reveal how homogeneous thinking took hold at VW. The pattern was visible for employees at all levels with examples, though often subtle, serving as a constant reminder of what was expected. Good examples are provided in the ARs from 2009 and 2010 with Winterkorn pictured in conversation with his design chief Walter de Silva and then the Chief Astronaut from the European Space Agency, Wilhelm Schlegel.

In the Company’s headquarters in Wolfsburg, Professor Dr. Martin Winterkorn, Chairman of the Board, and Walter de Silva, Head of Group Design, discuss every single detail. Both are perfectionists. Sometimes they know what the other is thinking without speaking a single word.... The two men complement each other perfectly. [Winterkorn] is never satisfied: “There’s always room for improvement.” De Silva is of the same mold: “Many people equate creativity with complete freedom, but it is actually discipline that is the basic prerequisite for creativity.” (AR, 2009, p.16 and p.19)

The chemistry is right – thanks to physics. Prof. Dr. Martin Winterkorn, Chairman of Volkswagen AG, and Hans Wilhelm Schlegel, Chief Astronaut at the European Space Agency (ESA) in Houston, do not need long to find a common wavelength. Both have passed through similar schools of thought in the course of their scientific training. (AR, 2010, p.31)

Both interviews highlight how VW’s leaders were expected to think about their work. Further, many VW managers were recruited from RWTH Aachen University, known as an elite training ground for engineers. Unsurprisingly, this common training bred common understandings of how to structure work, approach problems, and innovate. This was apparent from my own experience and

reinforced in a newspaper report that noted that: “Many Volkswagen managers who are said to be involved in the emissions scandal studied at RWTH Aachen University.... Lots of trainees that Volkswagen specifically recruits for management positions come from the university .... A network of alumni from the university seems to be involved in the emission scandal.” (*Handelsblatt*, 2015). This homogeneity of background was accentuated by the creation of “island cultures”, silos in which similar thought processes and ways of viewing problems were created and from “which information did not leak out” (*Bild*, 2016) across subunit boundaries. The lack of questioning, fruitful discussion, or tolerance of differences of opinion were all important antecedents to the emergence of wrongdoing.

### **Hierarchical Rigidity**

Homogeneity of thought was not the only way the organization influenced its employees. Communication was expected to rigidly follow hierarchical lines without deviation. Therefore, any problems that were identified had multiple levels through which they had to pass, leading to multiple opportunities for them to be hidden or ignored. In this environment, I came across some employees who tried to expose problems when they emerged, but the organizational structures and boundaries in place functioned as a barrier to the flow of information. The diesel scandal at VW could possibly have been prevented if the concerns raised by engineers about the defeat device had resonated across the organization. This is reflected by a report in the *Süddeutsche Zeitung* newspaper:

A few weeks after the start of the emissions scandal at Volkswagen in 2015, VW employee Oliver S. testified as a witness to investigators in Lower Saxony. What S. had to report about the years of manipulation and the conditions at Europe’s largest car manufacturer was remarkable. A colleague once told him how his manager forced him to use certain software. That software, also known as ‘Defeat Device’, was used to deceive authorities about the real pollutant emissions from diesel vehicles (*Süddeutsche Zeitung*, 2017).

Engineers have repeatedly recommended stopping the [defeat device]. The VW system – the Winterkorn system during his reign – was therefore one in which the employees had to learn to cope if they wanted to climb up the career ladder in the strict organizational hierarchy.... In-house criticism of the manipulated engine software existed from the start. But the critics were either not heard or criticized for their part as questioners. Some were afraid of losing their jobs” (*Süddeutsche Zeitung*, 2017)

People were held accountable for hitting targets in a very public way. “If you don’t take part, you get fired, that was the announcement at VW in the past” (*Süddeutsche Zeitung*, 2017). Cognitive dissonance was endemic: employees would follow the directions of their managers even if they believed that those directions were problematic. As I found, compliance was easier than resistance. Together with the pursuit of perfection this hierarchical culture became one of the biggest problems in a rigid system which stagnated communication: the information flow was restricted and very much top down.

Further, as employees advanced to managers and senior executives, they were very well rewarded but there was also an extreme pressure to continually perform at a high level. This pressure was transmitted down the hierarchy from one level to the next. The rigid hierarchical approach contributed significantly to creating the ground on which wrongdoing could flourish. The autoethnography and the documents we collected made very clear how communication took place. Senior managers informed of a course of action would in turn pass on information down the hierarchy with little opportunity for discussion; any information flow up the hierarchy was very limited and strictly via the chain of command. For example, a very strict system of cost management resulted in employees producing report after report for managers without having the chance to challenge anything.

As rank increased in the organization, so did salary, office size and other symbolic accoutrements. Senior managers, for example, could have two secretaries, their own conference room as well as meeting and relaxation space within their own office. This served to reinforce vertical boundaries in a very visible way. Again, the symbolism could be intimidating. I would walk faster, keep my head down and talk more quietly when entering the suite of senior managers' offices. This is how I experienced VW in the years up to the scandal: employees would not approach a higher manager but would strictly follow the chain-of-command. This, allied to the significant rewards for those who followed the rules and achieved, further prevented any form of challenge to questionable forms of behavior.

### **Preventing Participation**

In line with the rigid hierarchical structure, and as we have alluded to above, there was a clear expectation that employees were expected to strive to meet objectives imposed by senior management and neither question the goals nor the methods to achieve them. As expressed in the AR 2010 (p.31), "Employees must believe in the goals set". Again, the boundaries between levels were reinforced in a very explicit way. An example of this was provided when I was asked to complete the firm's annual employee survey, the "Stimmungsbarometer" in 2014. We would get the questions explained to us, but it was also made clear that if we selected an orange or red – rather than green – response, indicating some level of dissatisfaction, we would have to follow-up to explain our problem, something that made me feel uncomfortable. I made a comment about this and was told "I should not bite the hand that was feeding me." Criticism of any sort was not viewed positively by employees at any level. The main message from the "Stimmungsbarometer" was that employees would like to be able to feed more into decision-making processes. How they might do so was apparently ignored by senior management.

A further barrier to participation in any form of decision-making process was the lack of space for group or team meetings. Senior managers could use their personal meetings rooms to meet when and with whom they wanted. By contrast, other staff had immense difficulty in finding a room for a meeting, making it harder to have meetings, work collaboratively or discuss any problems that had been encountered.

### **Post-Scandal**

Following the emission scandal, VW engaged in a period of sustained transformation designed to ensure that something like Dieselgate could not happen again. The steps that were taken, following an extensive internal review supported by external consultants, reinforce our findings by pointing to the role of organizational design in creating an environment in which wrongdoing could take hold and flourish.

#### **Flattening Hierarchies**

A significant recommendation of the review was to dismantle the rigid hierarchies that had long been a feature of the firm. This process was reported in the 2019 AR indicating that this was not just an internal measure but also a very public and symbolic acknowledgement of a shift to a new way of working (AR, 2019, p.149). A “code of collaboration” as a foundation for a new, decentralized working style also got created. This new way of working was described as “genuine, straight forward, open-minded, and united” (Transform 2025+, 2016). The flattening of hierarchies and decentralization of decision-making had a direct influence on my daily work as I gained much more responsibility for my own projects.

The removal of vertical boundaries was further explained by the new CEO Matthias Müller in an interview with Johannes Winterhagen for *Momentum*, VW’s magazine, in 2015.

Winterhagen: *You just raised the subject of culture. What is your notion of good leadership?*

Müller: First and foremost open communication, readiness to accept responsibility, and a bold entrepreneurial spirit. We may have been remiss in not fostering this attitude in the past...The crucial point is that we as the Board of Management live up to the new form of cooperation, day in, day out.

Winterhagen: *What does that mean for you personally?*

Müller: Before I make a decision, I talk to the employees who are best able to give me the facts and information I need – regardless of where they stand in the hierarchy. And I listen very carefully, especially when opinions differ from my own”.

## **Horizontal Collaboration**

In addition to the breaking down of vertical hierarchies and the more decentralized approach to decision making, there was also an emphasis on horizontal subunits becoming more collaborative. In an organization that had previously emphasized the independence of subunits and demanded competition between them, this was highly significant. Reinforcing this collaborative approach, the word “together” became emphasized in public communications (e.g., AR 2017) and synergies were actively sought through cross-brand development alliances (Transform 2025+, 2016).

The shift in corporate governance and the understanding of compliance with industry regulators as a task for everyone was quickly adopted throughout the organization. I experienced this directly with my team leader soliciting ideas from the team as opposed to them being simply passed down the hierarchy for unquestioning implementation. These and other design changes were reported by US monitor Larry Thompson who had been charged with investigating VW following the scandal. VW enhanced its reporting structures and worked on internal processes and systems in different subunits across the company including technical development, governance, and legal compliance (Thompson, 2020).

## **New Values**

Corresponding to the structural changes described above, VW also developed new values that were described in a new code of conduct:

The Code of Collaboration formulated as part of the future program is the foundation on which the Group strategy rests. This Code describes how collaboration is to take place within the Group and between individuals in their day-to-day work. Its core values are encapsulated in the terms ‘genuine,’ ‘straightforward,’ ‘open-minded,’ ‘as equals,’ and ‘united’ (AR 2017, p.51).

Further, under the headline “Everything has to do with the emission scandal” in *Süddeutsche Zeitung* (2020) Werner reflected on how Volkswagen had been very hierarchical with an emphasis on authority. Changing this was central to the steps to transform VW’s culture.

CEO Müller called for a realignment of structures and mindsets, with the former focus on growth and becoming the biggest car maker in the world revised: “chasing records is not what drives Volkswagen” (AR, 2016, p. 8). These cultural changes also emphasized the importance of “we” not “me” (AR, 2018, p. 149). This approach was summarized in the “Together4Integrity” campaign published in the AR 2020. Employees were seen as important stakeholders with their opinions, assessments and criticisms actively sought. Emphasis was put on the creation of a corporate culture

with an open work environment characterized by mutual trust and collaboration with integrity in decision-making.

Herbert Diess, who took over as CEO in 2018, maintained Müller's approach, stating:

I am very proud of what our more than 660,000 employees have achieved in these challenging times.... We have implemented positive changes in our corporate culture. This was also confirmed in September 2020 by the final report of the team of the US Monitorship, with which we worked for four years on improving processes, creating more transparency, and reducing hierarchical thinking in the Group (AR 2020, p. 9).

Our insight into VW allows us to more fully understand how the creation of organizational structures and boundaries between individuals and subunits fostered an environment in which Dieselgate took place. As we show above, several factors came together that increased the likelihood of this happening. The strategy of aggressive growth with the objective of becoming the leading carmaker in the world, allied with a culture in which competition rather than cooperation became normalized and perfection at all levels was demanded and rewarded, were central components. Allied to this was the homogenous thinking that built up in parts of the organization and the belief in a strict hierarchical arrangement in which information predominantly flowed down from the top with any challenge or even suggestion from lower down unlikely to permeate up. The outcome of this was an organization in which boundaries were hardened, silos created, and broad understanding of what was happening in different parts of the organization diminished. When there were occasional voices of dissent, the rigid boundaries helped to ensure that they were isolated and/or ignored. As we will discuss below, the outcome was an environment in which wrongdoing could take place.

## **DISCUSSION**

Our data allow us to develop theory about the ways in which boundary work contributes to organizational wrongdoing in three ways. We do this by theorizing how a combination of cognitive, horizontal, and vertical boundaries create an infrastructure of organizational design that allows organizational wrongdoing, prevents it being challenged, and ultimately normalizes it in everyday activities. We also show how cognitive, horizontal, and vertical boundaries mutually reinforce each other. Recently, Brahm et al., (2021) demonstrated how the external boundaries of organizations can significantly influence the ways in which senior managers can act. Our work extends this understanding by focusing on the impact of internal boundaries. More specifically, we show how the creation of cognitive, horizontal, and vertical boundaries will directly influence the daily behaviors of organizational actors and can ultimately lead to wrongdoing. It is also worth emphasizing that the circumstances in which boundaries were created, and the impact that they had, were systemic. The conditions that led to them are not unique to VW and thus we contend that



wrongdoing is likely to emerge in any organization characterized by similar internal boundary arrangements.

### **Cognitive Boundaries**

An important contribution of our work is to demonstrate the ways in which cognitive boundaries become established and maintained to create a foundation for wrongdoing. That is, the design of an organization can shape the ways in which people think such that problematic or illegal practices are seen to be justifiable and even normalized. Gaim *et al.* (2021) explained how organizational actors pretend to achieve a task to cope with a goal that is out of reach. In our case, VW used the so-called “defeat device” to give the impression that it was achieving desirable emission target levels. We extend this observation by showing the mechanisms by which specific ways of thinking are established and reinforced. Our findings demonstrate how cognitive boundaries can work as a perceptual filter that supports the creation and maintenance of illusory practices over a long period of time without them being questioned.

As has been established elsewhere, those who share experiences, including formal education, corporate orientations, extracurricular engagements, and other activities can develop similar interpretations of how to act and even think (e.g., Dempsey, 2015; Dacin *et al.*, 2010). As we show, over time, what we refer to as cognitive boundaries can become established to create divisions between groups of people who think and act in a particular way and those that do not. Such shared understandings can occur wherever boundaries are formed, from the organization as a whole to individual subunits or even smaller social groups.

Langley *et al.* (2019) categorized boundary work as being competitive, collaborative, or configurational. We build on this by elaborating how boundary work processes initially emerge in organizations. Our findings indicate that cognitive boundaries shape how individual organizational actors and groups are likely to frame actions and ideas. This is important as it shows that we should not only focus on why wrongdoing takes place but how it can go unchallenged in organizations over sustained periods of time. If individual organizational actors and groups are repeatedly reminded of the need for extremely high levels of performance with the avoidance of mistakes paramount, there will likely be an avoidance of critical interrogation of, or even reflection upon, the processes that underpin results. Cognitive boundaries can harden, and the pursuit of growth and perfection can lead to a focus on what is produced rather than how it is produced. This can lead to an emphasis on ends over means.

In practice, organizations reinforce cognitive boundaries in various ways, including through the recruitment of employees who share the same mindset and/or who have trained or studied at the same institution. Such graduates are often likely to think homogeneously as they have been taught

in a similar manner and exposed to similar experiences. Such cognitive boundaries hinder diversity and critical thinking. We know that organizations recruit graduates from specific universities to find actors that are similar to those working in a firm already (Dacin, Munir, & Tracey, 2010; Rivera & Tilcsik, 2016). Further, Balch and Armstrong (2010) and Palmer (2013) have identified self-referential value systems in groups that can result in the approval of wrongdoing. We extend this work by theorizing how recruitment and socialization are key planks in the establishment of such a value system and showing the mutually constitutive role of cognitive boundaries in this process. Cognitive boundaries can therefore be seen as a root cause in the establishment and maintenance of organizational wrongdoing. Future research into how cognitive boundaries shape the ways of working in different organizational settings, and the implications of this for potential wrongdoing, would be useful.

### **Horizontal Boundaries**

Horizontal boundaries describe the divisions put into place between different subgroups at the same hierarchical level (Gieryn, 1983). Past research has shown that organizational design leads to two different kinds of control of organizational actors and their action through promoting or hindering communication, exchange, and teamwork. There are obtrusive controls purposefully put in place by the organization, such as administrative systems, and unobtrusive controls such as restricting who has access to communication channels (Palmer, 2013). The latter are sometimes not established purposefully but emerge over time. Unobtrusive controls can become particularly problematic for the flow of information because they are not identifiable in, for example, organizational charts and thus are difficult to manage. In situations where a competitive environment between different subunits exists, information flows can further atrophy. Over time, horizontal boundaries become increasingly reified. Balch and Armstrong (2010) noted something similar in their observation of a cocoon effect in organizations: the building of a self-referential value systems and sub-cultures within individual departments. This can become very dangerous, as we show: while silos are established to achieve goals, as boundaries harden, so the activities to achieve those goals go unchallenged because of the lack of scrutiny either across or within subunits. Kellogg (2009) explained the importance of individuals from different parts of an organization finding free spaces where they can come together to interact. At VW, we found just the opposite to great detrimental effect.

In practice, horizontal boundaries can be hardened by what are often considered to be non-divisive decisions that are often made for efficiency reasons. While on paper it might make sense to provide different clothing to identify groups of workers and provide different canteens in a big manufacturing site to allow employees enough time to eat, such practices reinforce divisions. The

location of restaurants and canteens, the clothing of workers, and the geographical distance between subunits can all reinforce boundaries as contact with, and information from, other subunits diminish. As boundaries harden, subunits become increasingly self-referential and stop looking for input or scrutiny from elsewhere.

As we found at VW, horizontal boundaries between subunits can be reinforced with cognitive boundaries. As boundaries become more rigid and are less permeated by external ideas, transfer of personnel, or external scrutiny, so wrongdoing is more likely to develop. Practices that may be relatively minor breaches of what is acceptable can go unchallenged leading to more egregious cases of malfeasance.

### **Vertical Boundaries**

Comeau-Vallée and Langley (2019) noted how competitive boundary work established hierarchical relations among professions. We build on this observation by showing how the reconstruction of social relations and reification of vertical boundaries between different hierarchical levels within organizations can create systems of exclusion that in turn increase the potential for wrongdoing. Of particular interest is the way in which power is concentrated at certain levels or is dispersed, what happens when the only worthwhile flow of knowledge is top down, and how impermeable boundaries are to the upward flow of information, especially that which is unpalatable. As we have shown at VW, there are actions and approaches that can make boundaries more rigid and in doing so increase the likelihood of wrongdoing. For example, if managers are setting very aggressive, non-negotiable growth targets to subordinates this can create an environment in which performance outcomes are valued above anything else. While competitive boundaries describe the establishment of boundaries between rank, we need to pay attention to how this organizational set up creates silos. If subunits are put into positions of competition rather than cooperation with leaders held publicly accountable, vertical boundaries become hardened around the silos created.

As we point out above, silos are usually considered in the context of horizontal boundaries, but an important outcome of our work is that we also need to consider the ways in which boundaries harden between different vertical levels. In this setting employees do not talk truth to power. Information does not get shared, and problems are not communicated or escalated as needed. Again, this also contributes to increasingly homogeneous working and thinking environments through the gradual process of separation resulting in decision-making that often goes unchallenged.

## **CONCLUSION**

In this paper, we examine how boundary work challenges our understanding of the emergence and reification of organizational wrongdoing. Our concept of cognitive boundaries allows us to explain not only how wrongdoing emerges but also how it can remain unchallenged in an organization.

Further, as we show here, cognitive boundaries harden vertical and horizontal boundaries, and provide insight into how they are created, entrenched, and institutionalized. With regards to horizontal boundary work that takes place to enable subunits of the organization to work effectively, we have found it can lead to a lack of communication and difficulties of moving between subunits. Organizational spaces created for exchange and representation can lead to the creation of an internal elite isolated from daily organizational life with a resultant organizational design that defines “in” and “out” groups, normalizes certain behaviors, and limits communication across intraorganizational boundaries. Case studies of the Dieselgate scandal at Volkswagen have discussed “removing the tumor” (e.g., Woodyard & Bomey, 2015) implying that this would allow things to return to “normal”. This is predicated on a belief that wrongdoing is the result of a small number of dishonest or misguided people. We further this explanation by showing how the cognitive, horizontal and vertical boundaries that were created at VW heavily contributed an environment in which wrongdoing became highly likely.

Palmer *et al.* (2016), observing that organizational wrongdoing is still perceived as one person doing something wrong, called for researchers to look at dynamics that cause organizations and employees to act in certain ways. In responding to this call, we have shown how the establishment of boundaries is one of these key dynamics. Boundaries often created to achieve efficiency can lead to the isolation of decision makers and the exclusion of groups from important operating practices to disastrous effect. Boundaries establish visible inequalities in status, knowledge, and power, hindering critical questioning, occluding processes, and creating a stagnant environment. In these conditions – in any organization – wrongdoing can emerge, become established, and end up becoming normalized.

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**Table 1: Data Collection Sources**

Data Source	Time Period	Use
Autoethnography	2012-2018	Detailed insight into activities and behaviors at VW
Company documents (e.g., Annual Reports, strategy documents)	2008-2020	Understanding of official strategic intent and what was emphasized by VW leadership
Media Footage (newspaper articles and documentaries)	2015-2020	Analyses of VW, the car industry and the Dielselgate scandal

**Table 2: Emergent themes pre-scandal**

Data Segments	Emerging Themes	Overarching Themes
<p>In the Company's headquarters in Wolfsburg, Professor Dr. Martin Winterkorn, Chairman of the Board, and Walter de Silva, Head of Group Design, discuss every single detail. Both are perfectionists. Sometimes they know what the other is thinking without speaking a single word.... The two men complement each other perfectly. [Winterkorn] is never satisfied: "There's always room for improvement." De Silva is of the same mold: "Many people equate creativity with complete freedom, but it is actually discipline that is the basic prerequisite for creativity." (AR, 2009, pp.16 &amp; 19)</p> <p>I remember my first day. I went to work by foot and could not find the right entrance. The Volkswagen site in Wolfsburg is like a city within a city and all gates are protected by security guards. I finally made it to the right gate and the guard told me where I had to go. In my first week I met the other 24 new employees that made it into a programme for which more than 3000 people applied. We knew that Volkswagen was a very good employer and that it had difficult entry requirements. We got congratulated for our achievement and learned about the organization, its strategy, the production of Volkswagen cars and the legacy that came with it. The group of applicants that got accepted was very homogeneous. The women that told us we should better not think about dying our hair, having tattoos or piercings. (Autoethnography)</p> <p>"Team work instead of silo thinking. Mr. Blessing, [the HR board member in 2017] stated that Volkswagen will renew its culture throughout the Group after the emission scandal. He sees Volkswagen in need of a profound transformation process." (Handelsblatt, 2017)</p>	Homogeneous Thinking	Cognitive Boundaries
<p>"Our mission – the future. The route has been mapped out, the strategy finalized: Our aim is to make the Volkswagen Group the leading automaker by 2018."</p> <p>"Prof. Dr. Martin Winterkorn, Volkswagen's Chairman of the Board of Management, is a perfectionist who knows the value of technological excellence" (AR, 2010, p. 28).</p>	Pursuit of Perfection	Cognitive Boundaries

<p>A main interview in the 2010 AR with a senior manager has the title “precision and perfection”. The word “perfection” is used six times in the interview. (AR, 2010)</p> <p>If mistakes took place employees would not always talk about them. The fear of being reprimanded for a mistake or being looked down upon by colleagues was always high. Successful managers were viewed as not making mistakes. Everyone knew stories of how senior managers would castigate front-line workers and middle managers if the quality of a car or car part was deemed inadequate. (Autoethnography)</p>		
<p>Employees must believe in ambitious goals their company sets (AR, 2010).</p> <p>Working in various departments was always based on the same pattern. Employees could be experts for their task but at the end the manager would decide what strategy to implement to recruit graduates, what color scheme to use or what to do in general. Hierarchy always outdid expertise. (Autoethnography)</p> <p>In the old Volkswagen world, nothing took place without pressure from the top. (Süddeutsche Zeitung, 2017)</p>	<p>Active Participation missing</p>	<p>Vertical/Horizontal Boundaries</p>
<p>The emissions scandal has recently turned the Volkswagen Group upside down. The nervousness can be felt at all levels of the 600,000-employee group - not just on the assembly line, where temporary workers fear for jobs and permanent workers for the future. The diesel manipulation has also left its mark on the highest floors – the board of directors, the presidium, supervisory board. The power relations that had been established over the years have fallen apart. Because the goals of the most important actors are not the same everywhere: While some fear for their dividends, others fear for jobs and entire plant locations (Frankfurter Allgemeine Zeitung, 2016)</p> <p>Müller, the new CEO had his first working day. He gave 1200 managers the chance to talk to him and ask questions. Müller was purposeful, relaxed, and this openness transferred (after some initial hesitancy) to the other managers. Müller stated that the "we" would be important at VW now, not the voice of one individual. In comparison, when Winterkorn was in charge managers needed to draw cards for the right to ask questions during events with their CEO. This stopped managers from talking to one another (Handelsblatt, 2015)</p> <p>The treatment of senior managers became seen as exemplary practice lower down in the hierarchy. I remember the introduction of our new HR area manager, a position one level below the board of management. Our head of department asked us to send questions we wanted to ask the new area manager so that she could approve them before we went to a formal introductory meeting with her. No ad hoc questions were permitted (Autoethnography).</p>	<p>Creation of Rigid Hierarchies</p>	<p>Vertical Boundaries</p>
<p>The core elements of 'Strategy 2018' included a targeted expansion of the brand and product portfolio and a further strengthening of the global presence. Translated into the daily work at VW this meant more brands, more models, more cars. The main thing was to gain more and more (Süddeutsche Zeitung, 2016).</p>	<p>Growth above Everything</p>	<p>Vertical/ Cognitive Boundaries</p>

**Table 3: Emergent themes post-scandal**

Data Segments	Emerging Themes	Overarching Themes
<p>Realigning structures, mindsets, the way we approach things (Momentum magazine interview, 2015).</p> <p>After the new strategy ‘Transform 2025+’ was introduced to us everyone suddenly started to talk about the need to acknowledge failure. Some departments or data labs started to introduce so called “Fuck up nights” where prominent managers and board members would discuss their biggest failures. This was all motivated by encouraging employees to not be afraid to speak up if something went wrong (Autoethnography).</p>	<p>Move from homogeneous thinking to heterogeneous thinking</p>	<p>Cognitive Boundaries</p>
<p>The new CEO talked about the realignment of structures (Momentum magazine interview, 2015).</p> <p>“The new human resources strategy is setting innovative trends. Hierarchies are being dismantled and modern forms of working such as agile working – an approach whereby most of the responsibility for the work organization is transferred to the teams – are set to be expanded” (AR 2019, p.149).</p> <p>One of my main ideas was that I wanted to change the way VW appeared to potential applicants and the public. I suggested that we no longer wear suits at career fairs but jeans, sneakers, branded college varsity bomber jackets and white shirts. It took several presentations to convince my department head but I was allowed try it out at a small career fair. It became a big success. The branded college jacket got introduced for all main VW events. It was now apparent that senior managers were open to new ideas from lower level employees in a way that never happened before “Dieselgate”. I was also given much more responsibility for projects on my own (Autoethnography)</p>	<p>Flatten Hierarchies</p>	<p>Vertical Boundaries</p>
<p>Emphasis is put on managers and employees to “encourage, protect and value the reporting of concerns and suspected wrongdoings” (AR, 2019, p.63)</p> <p>Changing the VW culture was declared a priority. New values were introduced and promoted relentlessly. Being critical was supported. In the HR-Marketing department, I witnessed a big jump from a very conservative culture to one that was open and supportive (Autoethnography).</p>	<p>Organizational Culture</p>	<p>Cognitive Boundaries</p>
<p>Rather than an emphasis on secrecy, collaboration across VW sites was encouraged. “The design of the production network enables us to respond dynamically to changes in demand at the sites. [We can] even out capacity utilization between production facilities.” (AR, 2019, p.174).</p> <p>When I started to do career events it was very much about not sharing all of my information with other departments and other VW brands. By 2018 this was very different. I was asked to reach out to other brands within the Volkswagen Group and we even had a shared calendar with other brands to see who would be at what event. The same happened at the department level, “sharing is caring” started to become a regular refrain, at least among most of the younger colleagues (Autoethnography).</p>	<p>Horizontal Collaboration</p>	<p>Horizontal Boundaries</p>