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Communication constraints in the safety system on South African mines and implications for the exercise of the Right to Refuse Dangerous Work

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Dates:
Received: 8 Nov. 2022
Revised: 10 Jan. 2024
Accepted: 16 Jan. 2024
Published: April 2024

How to cite:
Coulson, N. and Stewart, P.F. 2024. Communication constraints in the safety system on South African mines and implications for the exercise of the Right to Refuse Dangerous Work. *Journal of the Southern African Institute of Mining and Metallurgy*, vol. 124, no. 4, pp. 185–192

DOI ID:
http://dx.doi.org/10.17159/2411-9717/2444/2024

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Abstract

The Mine Health and Safety Act No. 29 of 1996, as amended, embeds an occupational health and safety management system that facilitates communication between representatives of the state, capital, and labour. In underground mines, two communication loops between these role players serve to separate the production chain of command from the political tripartite relations. Worker-elected health and safety representatives are involved in both communication loops, but are severely constrained in escalating their occupational health and safety concerns to the legal-political level. This has a direct bearing on the exercise of the Right to Refuse Dangerous Work (RRDW). As previously reported, health and safety representatives were found to primarily consult their production supervisors in preference to their trade-union representatives. This follow-up article presents production supervisor perspectives on the RRDW. The study demonstrates how, for mineworkers, the two distinct communication subsystems constrain, rather than facilitate, implementation of the RRDW.

Keywords

South African mines, worker safety, health and safety representatives, safety system, Right to Refuse Dangerous Work

Introduction

South African mineworkers won the Right to Refuse Dangerous Work/Leave a Dangerous Workplace (RRDW/RLDW) after a century of grueling and hazardous large-scale mining practices (Republic of South Africa, 1996). From the inception of modern industrial mining in the late 1880s, relations between black mineworkers and white supervisors were racialized. The chain of command at the underground rockface for the first hundred years of mining comprised black African labourers and 'hands-on' supervisory team leaders (formerly referred to as 'boss-boys') who served under white miners, who were, in turn, answerable to their shift overseer (formerly shift boss) and mine overseer (formerly mine captain). Systematic physical assaults and violence drove gold mining production until the mid-1960s (Moodie, 2005). Only the white miner and white supervisors, as well as the sole occupational group of black rock-drill operators, received incentive bonuses. Later, more rational and 'scientific' job-grading systems (such as the Paterson system), along with production bonuses for all mineworkers, were introduced into the mine workplace (Moodie, 2005). However, the key workplace qualification, the miner's 'blasting certificate', was only finally deracialized as late as 1988. Until then, the job of blasting, though effectively performed by the black team leader, had been reserved for white miners. Team leaders routinely deferred to the miners for both equipment and practical knowledge, despite possessing workplace experiential 'tacit knowledge' (Leger, 1985, 1992). The supervision of 'gangs' or teams of black labourers was a key role of both team leaders and the miners.

Despite liberal reforms in employment practice from the end of the 1960s, poor occupational health and safety (OHS) performance continued throughout the 1970s and 1980s under a command-and-control management style (Leger, 1986). At the end of the anti-apartheid struggle years (late 1980s), two types of worker safety representatives had emerged to address poor safety performance. Supervisor-selected 'safety representatives' were introduced under new mining regulations in 1988 (Department of Energy and Mineral Affairs, 1988), while 'safety stewards' were part of new safety agreements that were signed off with the then newly established National Union of Mineworkers (NUM) in some mining companies, such as Anglo American, but not in others, such as Goldfields. At the time, the new generation of trade union-appointed safety stewards stood in stark contrast to the employer-dominated arrangements of government regulations (Leger, 1985). It was these trade-union safety stewards who laid the basis for worker representation in the current OHS system on South African mines post democracy in 1994.

The promulgation of the Mine Health and Safety Act (MHSA) No. 29 of 1996 (Republic of South Africa, 1996) meant that, for the first time, there were legal OHS provisions in place that required consultation between representatives of the state, all trade unions, and the mining industry. These provisions finally complied with the International Labour Organisation (ILO) conventions, of which South Africa had been a signatory in 1919 (Hermanus et al., 2019) regarding Occupational Health and Safety (Convention 155) (ILO, 1981) and Safety in Mining (Convention 176) (ILO, 1995). At the time, this represented a shift from historical legacies and was a significant victory for the NUM. It was on the insistence of the NUM that new pluralist arrangements for worker–employer consultation under the MHSA (refer to Chapter 3 of the Act) on large mines found legal expression in a mandatory Health and Safety Collective Agreement signed between the employer and recognized trade unions at a mine site (Leon,1995). The intention was that worker-elected health and safety representatives (HSR) were either trade-union members, or at least buttressed by recognized trade unions. With high trade-union density remaining a feature of the South African mining sector today, the conditions for these OHS arrangements remain (Bhorat et al., 2014).

Section 23 of the MHSA or the expression of the RRDW/RLDW (hereafter refered to as RRDW) is a particularly progressive aspect of the OHS regime on South African mines. Under the Act, there are no stipulations regarding either the conditions and/or type of danger (such as imminent danger) limiting the right to refuse dangerous work. A South African mineworker can therefore *subjectively* believe the workplace is too dangerous to enter or work in and choose to withdraw, and in doing so, be protected from discrimination. However in the event of exercising this right, the MHSA does not stipulate the procedure to be followed. It was only as a direct result of research conducted for the Mine Health and Safety Council (Bid No: MHSC 5/15-16) in July 2016 that the Chief Inspector for Mines gazetted the *Guideline for a Mandatory Code of Practice on the Right to Refuse Dangerous Work and Leave Dangerous Working Places* (see Coulson et al., 2019). This guideline (Department of Mineral Resources, 2016) reinforces the role of worker Health and Safety Representatives (HSRs) and trade unions, and compels the employer to negotiate a site-specific procedure to be followed when a worker exercises the RRDW. This guideline states that the resolution of unsafe workplaces should be facilitated at the lowest possible level, preferably in the workplace.

This paper advances the analysis of two studies that we conducted that examined, firstly, the role and dominant communication loops involving worker HSRs (Coulson and Christofides, 2021) and, secondly, the implementation of the RRDW (Coulson et al., 2019; Stewart et al., 2013). Specifically, this paper traces the communication between workers and supervisors when the RRDW is formally activated. Coulson et al. (2019) had workers' responses to the RRDW as its key focus; this companion article analyses the responses of supervisors. The evidence of supervisors sheds further light on how communication in the safety management system is constrained and that effectively serves to undermine implementation of the RRDW and hence overall mine health and safety.

A note on methodology

This paper reflects on case-study research of worker HSRs conducted on four underground mine sites in South Africa between 2015–2016, during which in-depth interviews (n = 82) were conducted with a purposive sample of worker HSRs to understand their role. Other in-depth interviews (n = 17) were conducted with members of the employer OHS system and focus groups (n = 4) with production team members. The detailed methodology for this study can be found in Coulson and Christofides (2021) and Coulson (2018). The methodology and findings with respect to the study of how the RRDW had been implemented have been outlined (Coulson et al., 2019), including details of ethical protocols and permission to publish by the MHSC, and are not repeated here. In brief, a representative sector-wide quantitative survey, focus group discussions, and key informant interviews were used in a concurrent triangulation mixed-methods approach (Cresswell et al., 2003). This article presents new data specific to responses of supervisors directly engaged in the production process.

Results part 1: Published research findings from two studies

Healthy and safety representatives and two closed communication loops

The MHSA makes provision for a two-tier system of HSR within the workplace: workplace HSR and fulltime HSR (Figure 1). Workplace HSR fulfill and perform their safety role in designated work areas only and while engaged in the daily routines of their fulltime occupation. Fulltime HSR are elected and seconded for up to three years and work in a fulltime capacity on health and safety issues across the whole mine site. On a large mine, fulltime HSRs are often elected for a specific shaft, usually between two and four representatives per shaft. Fulltime representatives can co-ordinate or have oversight of the activities of the workplace HSR. The combined two-tier system on very large underground mines means that there can be hundreds of HSRs on site. Over a decade ago, the Chamber of Mines (now the Minerals Council South Africa) estimated that 40 000 HSRs in the industry needed training (CoM 2009–2010, cited in Tuchten, 2011).

The HSRs (see MHSA Section 30) have, inter alia, the right to raise any OHS issue with the employer, represent workers, and talk to inspectors. They have the right to withdraw workers from a dangerous workplace in accordance with Section 23 (RRDW) of the Act and can have at least equal, or even greater, numerical representation at the employer–employee mine health and safety committee (Sections 29, 26, Regulation 6.9.a, 25(2)) (Figure 1). These arrangements for worker representatives in South

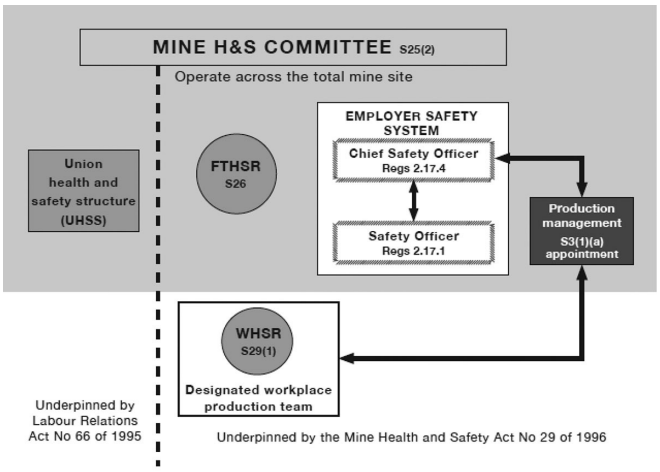


Figure 1—The mine health and safety management system as found on South African mines, in compliance with the MHSA No. 29 of 1996 as amended [Note references to the specific sections of the Act]

African mines are generous when compared with other mining jurisdictions, such as Australia where there may only be one or two site-based HSR (see Walters et al., 2017).

On a large mine, a third type of HSR is also found; a trade-union shop steward appointed under the Labour Relations Act (Republic of South Africa, 2002), who is a member of the union health and safety structure (UHSS). This type of worker representative has no specific powers under the MHSA, but is commonly a member of the mine health and safety committee.

Despite robust provisions for worker representation under the MHSA, serious dysfunctions have arisen in the tripartite project in South Africa (Coulson and Christofides, 2021). Case-study research undertaken by Coulson demonstrated the presence of two dominant communication loops (Figure 2 and Figure 3) (Coulson and Christofides, 2021). These were found to be characterized by weak and strong communication channels between different role players. In practice, the arrangements for worker HSRs, although compliant with the MHSA, were characterized by inconsistent communication between fulltime HSRs and workplace HSRs, as well as weak communication with organized labour. The mine safety department, however, would generally be in constant contact with production management. This makes the production chain of command, from shift overseer to the frontline supervisor team leader and work teams, the dominant daily communication. Thus, the interface between the production supervisor and the workplace HSR dominates and overshadows the relationship between the workplace HSR and their fulltime HSR. Thus, the workplace HSR is locked into the day-to-day micro-politics of production, as opposed to escalating workers' safety concerns with their fulltime HSR.

Coulson and Christofides (2021) provided an explanation for this by drawing on the work of Luhmann (1989), who argued that closed socio-autopoietic (or self-regulating) loops of communication serve the purpose of simplifying complexity in the broader environment in which any system is located. Thus, the Workplace Safety and Production Loop reduces the complexity of the socio-technical processes of production into a series of standards, rules, and regulations of anticipated behaviour, practices, and workplace orders. The Compliance and Enforcement Loop simplifies the political capital–labour relations under the auspices of the statutory Mine Health and Safety Inspectorate (MHSI) of the Department of Mineral Resources and Energy (DMRE) and manages OHS issues tabled by any of the members of the tripartite arrangements.

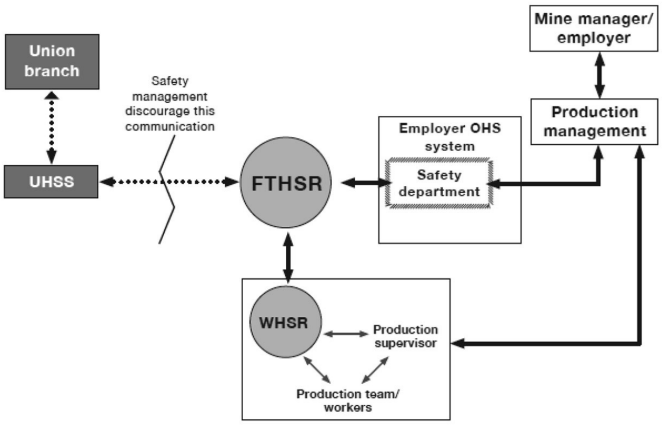


Figure 2—Workplace Safety and Production Loop (from Coulson and Christofides, 2021) [FTHSR: fulltime HSR; WHSR: workplace HSR; UHSS: union health and safety structure]

As a consequence of these two self-regulating communication loops, the two-tier system of worker representatives – workplace HSRs and fulltime HSRs effectively operate as the "eyes and ears" of the employer. They do not, as intended by the legislation, primarily serve as the autonomous organizational trade-union voice of workers. Figure 2 shows how, within the two-tier structure, the worker HSRs are communicatively restricted to the employer OHS system and safety department, which dominate the Workplace Safety and Production Communication Loop 1.

The study further reported, as can be seen in Figure 3, that it is the UHSS, located in the Compliance and Enforcement Loop 2 – rather than fulltime HSRs, who had a strong relationship with the regulator/inspectorate. In fact, the ultimate compromise surfaces in the role of the fulltime HSRs (Coulson and Christofides, 2019). These representatives were found in the case-study research to report into the safety department, which is central to the Workplace Safety and Production Loop 1 (Figure 2). Although the fulltime HSRs who participated in the case-study research were all trade-union members, not one of these representatives (on four case-study sites) worked from the trade-union office on the mine shafts. Further, it was not the norm for fulltime representatives to even report regularly to the structures of organized labour. As explicitly noted in Figure 2, employer safety management actively discouraged the fulltime HSRs from interacting with the UHSS.

Worker perspectives on the Right to Refuse Dangerous Work

The research commissioned by the MHSC on the RRDW (Bid No MHSC/5/12-13) found that while there were high levels of awareness about the right, the exercise of the RRDW had not been fully realized (Stewart et al., 2013). Indeed, the concern was why workers did not act autonomously regarding their own safety, despite over 90% reporting awareness of possessing their legally entrenched right to refuse to do dangerous work (Stewart et al., 2013). Instead of individually claiming their legal right to exercise their RRDW, mineworkers would first consult widely before withdrawing from a dangerous workplace. Workers consulted, among others, their worker HSR (32%) and supervisors (71%) (Coulson et al., 2019). This finding, significantly, indicates a marked shift in trust relationships between black African mineworkers and supervisors on mines. Despite the historically tense, racialized relationship between African mineworkers and white supervisors, evidence pointed to greater co-operative, communicative interaction than the contextual, worker-oriented literature had previously thought existed (Coulson et al., 2019). For example,

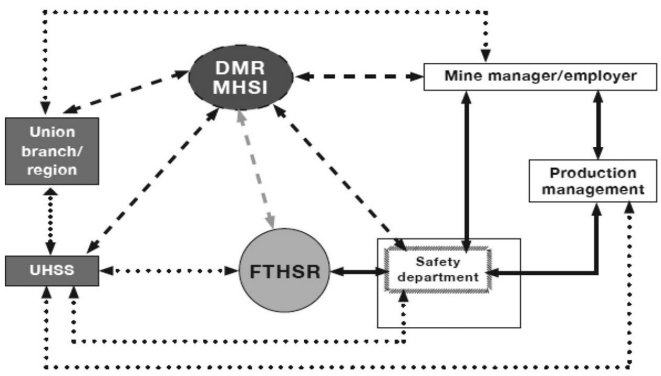


Figure 3—Compliance and Enforcement Loop (from Coulson and Christofides, 2021) [FTHSR: fulltime HSR; UHSS: union health and safety structure; DMR MHSI: Department of Mineral Resources Mine Health and Safety Inspectorate]

the percentage of workers and supervisors who considered their relations as a '*big problem*' when meeting production targets was relatively low across coal mines (11%) and gold mines (12%), though rising to 18% in platinum mines (Stewart et al., 2013). While subject to confirmation by future research, this suggests that de-racialization three decades ago has immeasurably improved the worker–supervisor relationship. Objectively speaking, this was a sound basis for implementation of the RRDW in the mining workplace.

In the article by Coulson et al. (2019) based on the MHSC-commissioned study of the RRDW (Stewart et al., 2013), we made several observations about how this right was experienced by workers. Using a typology of work refusals first developed by Gray (2002, 2009), we showed that the formal RRDW was, to reiterate, not the default position for workers, despite a very high level of awareness about the right. Obstacles to the formal practice of the right were found in the responses of workers to qualitative questions. The right was believed to apply to safety issues, rather than health, and procedures for the RRDW could not be distinguished from the general safety rules that apply in an underground mine workplace. Workers also described "*feeling bad*" if production was lost when they exercised the RRDW (Coulson et al., 2019).

HSRs were crucial to the formal exercise of the RRDW. Bezuidenhout et al. (2015) previously found workers responded positively to HSRs. We found more workers were asked to stop work by an HSR (56%) than had personal experience of the RRDW as an individual (45%) (Coulson et al., 2019). Despite this, workers were critical of the lack of capacity of the HSR to escalate an issue beyond the immediate workplace. Workers suggested that their HSR lacked power or misinterpreted their role. Informal expressions (both confrontational and non-confrontational) of worker resistance to a dangerous workplace were also commonplace (Gray, 2002). Up to a third of workers described going back into a workplace while *still deeming* it to be dangerous, despite having withdrawn (Coulson et al., 2019). The organization of production work around teams of workers made the exercise of the right more difficult, as well as fear: fear of repercussions, of supervisor threats, of vindictive behaviour, and even of peer pressure by those who did not want to sacrifice their production bonuses.

The employer, organized labour, and the Right to Refuse Dangerous Work

Both the case-study research and study of the RRDW found the employer and organized labour responded positively to the RRDW. For example, a general manager issued laminated 'RLDW cards', personalized with his signature to demonstrate his commitment to taking safety seriously, in which he gave workers the '*authority to withdraw from any unsafe working environment and to refuse to carry out any instruction that will endanger you and your fellow workers*' (Stewart et al., 2013). However, this proactive stance also stepped over an invisible line: in another instance, a manager '*demanded*' that workers withdraw from a dangerous workplace (Coulson et al., 2019). In our paper (Coulson et al., 2019), we argued that the RRDW is vulnerable to monopolization and integration into employer risk-management strategies at the expense of individual workers, who had yet to learn to claim the right in the interest of both their own health and safety. Compounding this, we observed that the *Guideline for a Mandatory Code of Practice on the Right to Refuse Dangerous Work and Leave Dangerous Working Places* is partial to the employer because the recommended dispute mechanism favours the employer in the final instance; it does not recommend inspectors from the MHSI as the final arbitrators. Thus, contrary to the powers conferred on the HSRs and the mine health and safety committee under the MHSA, which enable worker representatives to make a direct plea to MHSI, the inspectorate in their guidance on the RRDW puts inspectors out of reach for HSRs (Coulson et al., 2019).

Nonetheless, it is not just the employer that has found a role for the RRDW beyond that for which it was intended. Our study found that workers (35%) agreed that the RRDW was abused and used for ulterior motives (Coulson et al., 2019). Other studies corroborate this: in 2013, in the months prior to the start of South Africa's longest labour strike on platinum mines, the RRDW was used by rock-drill operators to slow down production and gain management attention for improved wages (Moodie, 2016; Stewart and Nite, 2017). Our case studies (Coulson and Christofides, 2021) found that organized labour sided with the employer in the event of the MHSI closing a workplace for violations of the MHSA: trade-union representatives wanted the workplace open and said that workers could use the RRDW to protect themselves in the event of danger. Thus, the burden was placed on workers to keep themselves safe, rather than the employer that is legally responsible under the Act.

Results part 2: New data from the study of the Right to Refuse Dangerous Work

As previously noted, the data collected from supervisors was part of the research conducted for the MHSC (Bid No: MHSC 5/12-13) (Stewart et al., 2013). This additional data are presented here under two headings: the first concerns supervisor response to the RRDW; the second concerns supervisor engagement with worker HSR.

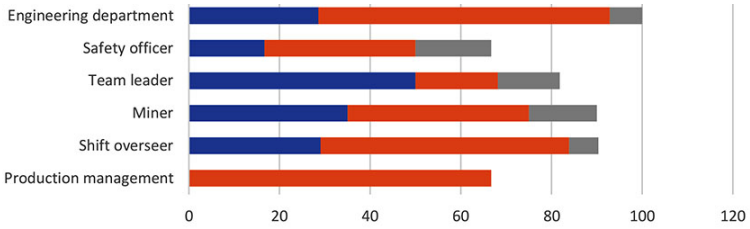
The demographic profile and occupational descriptors of the supervisory respondents (n = 96) signals a largely experienced workforce (Table I). The supervisor informants were mainly drawn from the gold and platinum sector. Over half (55%) had more than 10 years of mining experience and four-fifths were black Africans, which confirms the extent of transformation of the historical racial division of labour that has occurred in frontline production management command post-apartheid (Table I). Thus, although racial discrimination and undercurrents remain characteristic of much of the post-apartheid mine workplace (see Shaw et al., 2010), the narrative is now more complex than the historical alignment of race and class: that of black workers versus white supervisors and managers.

The reported occupations of the sample of supervisors were as follows: production manager (3%), shift overseer (32%), team leader (23%), miners (21%), safety officers (6%), and engineering department (15%). This supervisory echelon manage both the day-to-day production targets and hazards in the workplace, i.e., they are responsible for both production and safety. The engineering team advise and determine controls for hazards, while the shift boss, team leader, and miner make up a chain of command tasked with meeting production targets *and* mining safely.

Right to Refuse Dangerous Work and supervisor responses

When supervisors were asked who they trusted to provide accurate information in the workplace, their answers reflected their line function. Immediate supervisor and/or mine management was the predominant source of accurate information reported. Colleagues or other stakeholders, such as trade unions and HSRs, were very poorly referenced by the management chain (Figure 4).

Supervisors can exercise the RRDW in their capacity as employees; however, unlike HSRs, who are protected from any form of liability when acting in their role as representatives, management



	Production management	Shift overseer	Miner	Team leader	Safety officer	Engineering department
Supervisor	0	29	35	50	17	29
Management	67	55	40	18	33	64
Collegues	0	6	15	14	17	7

Figure 4—Who supervisor respondents (*n* = 96) trust to provide accurate information in the workplace

Table I

Demographic and occupational descriptors for supervisor respondents (*n* = 96)

Variable	Category	Frequency	%
Age (years)	21–30	12	13
	31–40	32	33
	41–50	36	38
	51+	16	17
Sex	Male	84	88
	Female	12	13
Race	African	76	79
	Coloured	0	0
	White	20	21
Citizenship	South African	86	90
	Non-South African	10	10
Commodity	Gold	36	38
	Platinum	42	44
	Coal/other	18	19
Years in mining	< 1	5	5
	1–2	5	5
	3–5	14	15
	6–10	19	20
	> 10	53	55
Years at mine	< 1	8	8
	1–2	9	9
	3–5	19	20
	6–10	19	20
	> 10	41	43
Occupation	Production manager	3	3
	Shift overseer	31	32
	Miner	20	21
	Team leader	22	23
	Safety officer	6	6
	Engineering department	14	15

representatives carry responsibility for safety performance at all times. When the supervisor respondents were asked if they had ever experienced the workplace as too dangerous for work, 45% responded positively and 55% said no. Of those who responded positively (as having encountered a workplace they deemed too dangerous to enter), when asked with whom they had discussed their concerns, nearly three-fifths (57%) of all supervisor respondents *abstained* from answering the question. Of those who did respond, both miners and team leaders largely relied on their respective line supervisors – the miner and the shift overseer. Only at the level of the shift overseer did it appear that mine management became more routinely involved in discussions about a dangerous workplace (Figure 5). Thus, the findings show that the management chain of command remained largely intact during concerns about a dangerous workplace.

By comparison, Figure 6 shows that only 13% of supervisor respondents who responded to this question discussed their concerns with the HSR and/or mine health and safety committee, and similar percentage of supervisors discussed concerns with union representatives. From these findings, it can be inferred that few instances of a dangerous workplace were escalated to fulltime HSRs, to trade-union shop stewards/UHSS, or to the mine health and safety committee. The findings were also suggestive that, far from matters being resolved in the immediate workplace between supervisors, the production team, and the HSR, supervisors generally chose to escalate matters to their immediate superior because only 22% discussed matters with colleagues or workers.

The significance of the high number of abstentions from supervisors responding to questions about the RRDW spoke to supervisor concerns and their structurally contradictory position in having to manage the competing demands of both production and safety. This is a long-standing tension in the position of underground line management. Although the reasons for this were not specifically explored in the research, more than 50% of supervisor respondents preferred not to implicate themselves in any kind of discussion about a dangerous workplace. Further, more than 65% of shift overseers, 60% of miners, and 41% of team leaders abstained from answering questions when asked if *they had returned* to a workplace from which they had withdrawn because they thought it was dangerous. Only a third of respondents (34%) thought procedures were adequate for the RRDW and 55% of respondents abstained from answering this question. The reasons behind these large numbers of abstentions warrant further examination. This is suggestive, however, of how supervisors cope with managing the contradictory demands of production and safety. Supervisors fear blame for something being sub-standard in the workplace. Workers in the same study reported supervisors turning a blind eye to risk taking, taking risks themselves, and that even when something was clearly sub-standard, they would coerce workers to continue work or victimize those who raised a concern (Coulson et al., 2019).

Health and safety representatives and supervisors' responses

The valuable role of HSRs in the exercise of the RRDW was reinforced by supervisor respondents. According to supervisors,

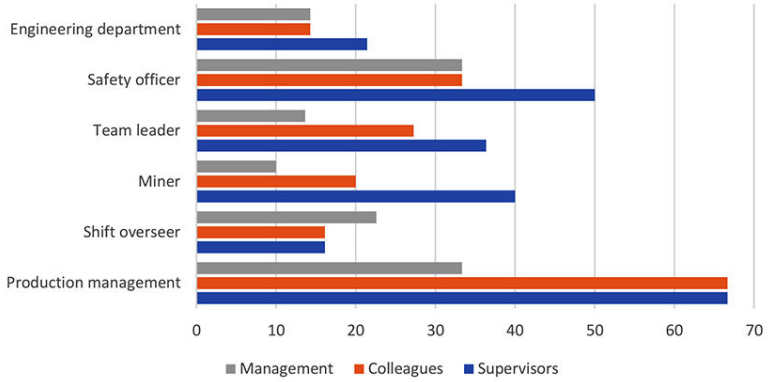


Figure 5—With whom supervisor respondents (*n* = 96) discussed their concerns about a dangerous workplace [Note: 57% of supervisor respondents abstained from answering this question]

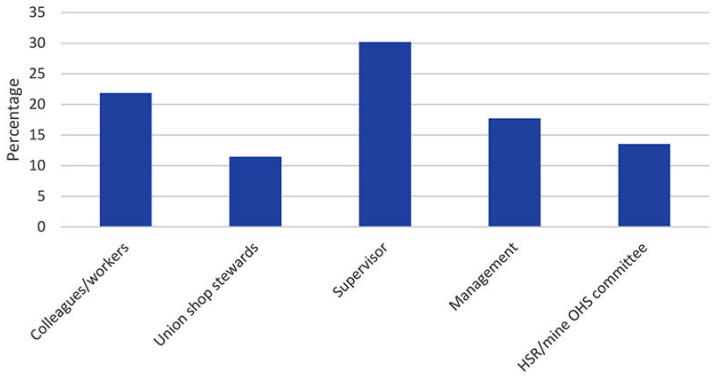


Figure 6—Who supervisor respondents (*n* = 96) discussed concerns about a dangerous workplace with [Note: 57% of supervisor respondents abstained from answering this question]

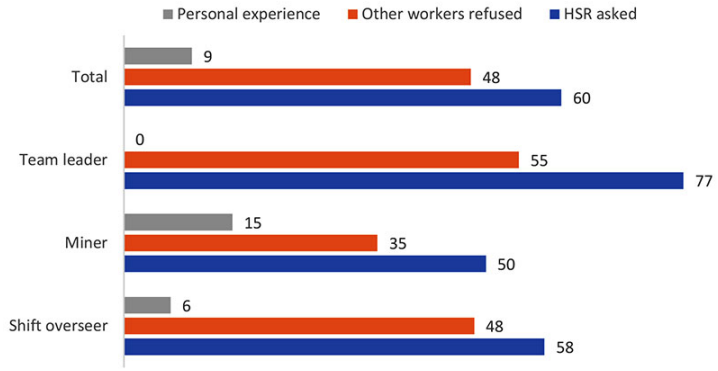


Figure 7—Supervisor respondents' (*n* = 96) experience of the Right to Refuse Dangerous Work

the HSRs had most experience of the RRDW. This view aligned with 56% of workers who reported that they were requested by an HSR to withdraw from a workplace (Coulson et al., 2019). Figure 7 shows that the miner, team leader, and shift boss all reported that, in their experience, it was the HSR who was most likely to have asked workers to withdraw. This finding is in stark contrast to the finding that only 13% of supervisors consulted with HSRs about conditions in the workplace when concerned that it was too dangerous. As noted above, this diverges with regulatory guidance in the sector, which places the onus on the resolution of unsafe workplaces to be facilitated at the lowest possible level, preferably in the workplace. The insights from supervisors suggest that although HSRs may initiate the RRDW, they are unlikely to be found discussing the solution. This also correlates with workers' experience that HSRs lack the power to ensure matters are adequately resolved (Coulson et al., 2019).

Discussion

The new data shared in this paper indicates that many supervisor respondents experienced chronic vulnerability. This arguably became acute when having to openly confront their structural position in response to researchers' direct questions. Supervisory respondents chose to abstain from answering questions about their own behaviour in the event of having withdrawn from a dangerous workplace. Thus, the views of these underground supervisors remain under-researched, despite being the custodians of a collective wealth of organizational and experientially based mining knowledge.

Figure 8 summarizes the findings of this paper. This shows that the communication and interaction between parties, once the RRDW is triggered, did not precipitate a change to the dominant patterns of communication for the HSR (Coulson and

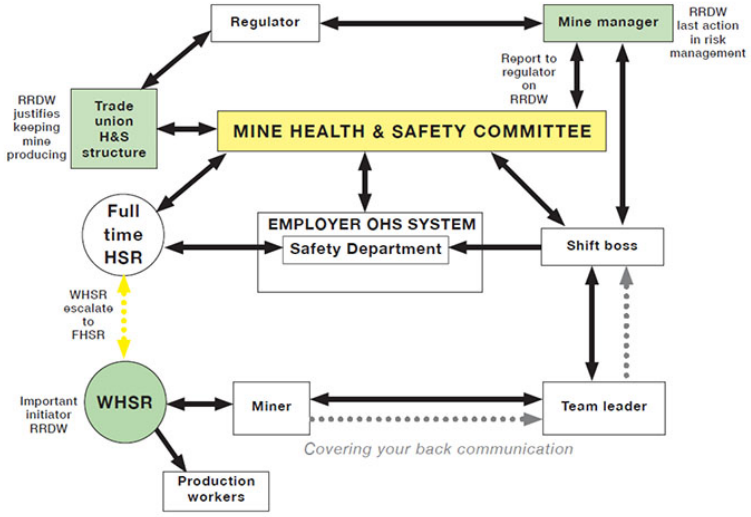


Figure 8—Dominant communication loops in the mine workplace and the Right to Refuse Dangerous Work [WHSR: workplace HSR]

Christofides, 2021). Although the exercise of the RRDW was more likely to be triggered by the workplace HSR, the expectation that workers and supervisors may, as a consequence, come together to review the workplace, did not occur. Rather, supervisors, starting with the miner, escalated issues to their immediate superior, as determined by the production management chain. This upward communication, by supervisors serving to '*cover their backs*' in the event of something going wrong, is an integral component of the Safety and Production Loop (Coulson and Christofides, 2021). Although research provided evidence of increased levels of trust between supervisors and production workers, once the RRDW had been formally triggered, the dominant Safety and Production Loop was enacted. The data provided very little evidence of direct engagement between HSRs and supervisors. The rapid escalation of issues up this historical management chain provides some insight why individual mineworkers may choose not to exercise the right, given that doing so could potentially involve the highest levels of production management. Both production workers and supervisors reported that they had more experience of the RRDW being triggered by the HSR; in this case, individual workers are protected from potential repercussions by the powers of the HSR. Individual workers experience strength in numbers, given that the HSR has the power to remove all workers from a dangerous workplace. Given that the RRDW will be escalated to senior production management, these precautionary moves by workers are cogent.

Figure 8 shows in yellow the intended communication channels for worker representatives in the event of the exercise of the RRDW, as described in the recommended guidance issued by the MHSI. It shows how HSRs in the workplace are expected to escalate issues through the fulltime HSR, for eventual review at the mine health and safety committee. However, in cases where escalation of issues through the fulltime HSR may happen, the fulltime HSR could reasonably be expected to take concerns to the employer safety department, to whom they mostly report (Coulson and Christofides, 2021). This, in and of itself, need not present a problem, provided issues are resolved to the satisfaction of the worker representatives and their constituencies. Yet this is not the case. As we have previously reported, we found up to one-third of workers who had withdrawn from a dangerous workplace went back while believing it still to be dangerous (Coulson et al., 2019).

The manipulation of the RRDW that has emerged in the case of the employer and organized labour, and even workers themselves, must mean that the second dominant communication loop on mines involving HSRs—the Compliance and Enforcement Loop (Figure 3)—is corrupted with respect to any advocacy efforts of HSR. The employer was found to hold interests in the right being exercised, as the very last control in risk management where other controls failed; organized labour was willing to use the right to advance other struggles, either to keep a mine open and producing (when closed by the MHSI for OHS violations), or to secure wage increases; workers report the right is abused. These deviations from the purpose of the right make the advancement of worker demands for OHS improvements immensely complex. Only the MHSI is in a position to enforce the intention of the MHSA, although, under the current guideline (Department of Mineral Resources, 2016), they too have stepped away from bolstering worker rights under the RRDW (Coulson et al., 2019). These concerns should be a central concern for the present study funded by the MHSC, Project CoE 200106 *Impact of Implementing the Guide for the Mandatory Code of Practice on the Right to Refuse Dangerous Work (RRDW) and Leave Dangerous Working Place (RLDWP) on Occupational Health and Safety in the South African Mines,* which was published in March 2024. This research expressly assesses the impact of the mandatory guideline (Department of Mineral Resources, 2016) that must include whether health and safety collective agreements signed between unions and management include an agreed procedure for the RRDW. Management has been shown to resist fulltime HSRs reporting independently to organized labour via the UHSS shop stewards (Coulson and Christofides, 2021); however, the introduction of the guideline in 2016 presented an opportunity for organized labour to reclaim the RRDW for individual workers.

Conclusion

The inclusion of supervisor data from a study on the implementation of the RRDW against the backdrop of closed communication loops, shown to severely constrain the effectiveness of worker HSRs, sheds light on why the RRDW is poorly adopted by individuals. It explains the ineffectiveness of HSRs as advocates for a safe working place. The data provided by supervisors in the RRDW Work Bid 65/12-13 study (Stewart et al., 2013) both prefigured and confirmed recent analysis (Coulson and Christofides, 2021); it justified concerns that HSRs were constrained from effectively performing in the interests of the RRDW. Workplace HSRs embodied the most practical experience of exercising the RRDW.

These HSRs, however, were effectively communicatively disabled from addressing RRDW matters in the workplace and were hence not central to their resolution. In addition, the HSRs were effectively constrained and unable to escalate their concerns to trade-union safety structures. The reporting relations between workers and their workplace HSRs, and their fulltime HSRs and trade-union shop stewards—who sit on the mine safety committee and have access to the tripartite 'Compliance and Enforcement'—is poorly institutionalized in comparison with the 'Workplace Safety and Production' system and its regular meetings along the managerial chain of command. Fulltime HSRs, as previously shown, were actively discouraged from reporting directly to their trade-union structures. The employer has held effective sway in dominating the OHS environment underground, notwithstanding the legislative intention of work representation in OHS. What has emerged here is that the ambivalence of supervisors, responsible for both production and safety, to worker representation contributes to the absence of systemic organizational support for the RRDW in the spirit of the MHSA. This needs urgent redress if the targets of zero harm are to be achieved in South African mining.

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