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'Just transition'? Conceptual challenges meet stark reality in a 'transitioning' coal region in Australia

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ABSTRACT

'Just transition' (JT) is an increasingly popular concept developed by unions and adopted and adapted by academics, environmentalists, government and non-governmental organizations, and international institutions in recognition of the need to address social concerns and inequities emerging from efforts to address environmental problems. It has been noted, however, that 'JT' lacks both conceptual clarity and empirical evidence of its practical applications. This paper examines the 'theory' and practice of 'JT' by first considering the competing interpretations and conceptual understandings of 'JT' and second, the challenges of realizing a 'JT' in an Australian coal region where transition is occurring. The paper argues that achieving 'JT' requires more than government provisions and interventions and that unions must perform an active part in the 'JT' process through their relations with employers, workers, government, and community. It suggests the lack of clarity within the 'JT' literature may be the concept's lasting strength.

KEYWORDS

Just transition; electricity generation; trade unions; carbon emissions; labour market intermediaries

Introduction

Governments and private enterprise are under renewed pressure to respond to the climate crisis in socially responsible ways. Environmental policies of the past which have resulted in community hardship and job loss have been scrutinized, mistakes have been acknowledged, and new approaches to balancing social and ecological concerns are being considered (Healy & Barry, 2017). There is a growing recognition that communities adversely impacted by the introduction of climate compatible development should be provided dignity and ownership over the process of transition through the formulation and introduction of locally sensitive transition and assistance programmes. 'Just transition' (JT) has become an increasingly popular concept used to draw attention to the equity and justice challenges associated with efforts to steer society towards a more ecologically sustainable path (see Stevis & Fellis, 2015, 2016 for a discussion of its conceptual origins and evolution). Originally developed by North American trade unions, it has since been widely adapted and adopted by academics, environmental organizations, governments, NGOs, and international organizations (e.g. ILO, United Nations Environment Programme (UNEP)). With the growth in JTs' popularity, however, a considerable divergence in views and interpretations of the concept has emerged resulting in a lack of clarity (Felli, 2014). In addition, questions have been raised as to whether JT is achievable or is simply aspirational with the number of practical examples of JT remaining sparse and largely undocumented (see Felli, 2014;

International Trade Union Confederation [ITUC], 2017; Labour Network for Sustainability, 2017). The space between the theory of JT and its application in practice is the focus of this paper. It considers two interrelated questions:

- (1) Does the lack of conceptual clarity present problems for realizing JT?
- (2) What lessons can be learned, both conceptually and practically, through examining where JT has been embraced at a local level?

In order to interrogate the practical aspects of JT, the study considers a recent case in Australia where unions and government have sought to develop a JT response in a coal region where one of its major coal mines and power stations were suddenly closed by their multinational owner. It considers the initiatives and challenges in realizing a JT in this context and the implications for our conceptual understanding of JT. The paper consists of four parts. First, it begins with a discussion of JT. This is followed by a methods section, a historical and contextual discussion of the case study, and a section which outlines how local unions have sought to develop practical JT solutions to assist disadvantaged power industry employees. A discussion of the challenges, lessons learned, and implications of the case study for our conceptualization, understanding, and application of JT is presented followed by a brief conclusion.

'JT': theory and practice

The inequities associated with climate change have been well documented (Roberts and Parks, 2007; Vanderheiden, 2008). While wealthy industrialized societies are responsible for the vast majority of accumulated greenhouse gas (GHG) emissions that cause climate-related harms, the impacts fall disproportionately upon poor people living in developing countries (IPCC, 2007). Moreover, future generations will pay the price for 'the affluence of the world's most advantaged nations and persons' (Vanderheiden, 2008, p. 121). Environmental justice advocates maintain that environmental action aimed at mitigating climate change must seek to address both environmental destruction and the social inequities associated with maintaining the status quo (Schlosberg, 2013).

Policy approaches aimed at changing the status quo, such as climate change mitigation can potentially raise their own equity concerns for industries, organizations, workers, and communities who may be affected by these policies. It is now generally acknowledged that unequal outcomes and perceived community vulnerabilities from climate change mitigation policies are a major barrier to achieving meaningful outcomes in national and international environmental politics (Healy & Barry, 2017; Roberts and Parks, 2007). Attempts to regulate and reduce emissions from GHG-intensive industries, for example, have raised concerns about the treatment of workers associated with these traditional industries. As the UNEP has recognized, climate change mitigation policies will have uneven impacts, with carbon-exposed regions potentially suffering disproportionate hardships that necessitate government interventions

... where industries are highly concentrated in one or a handful of regions, these impacts can have serious consequences for the local economy and the viability of communities. These regions will need pro-active assistance in creating alternative jobs and livelihoods, acquiring new skills, and weathering the transition to new industries. (UNEP, 2008, p. 288)

Effectively addressing the problems of anthropogenic climate change thus requires a commitment to fairness, both in terms of addressing the inequities associated with the differential impacts of climate change but also the inequities associated with the social and geographical impacts of climate change mitigation policies (see also Vanderheiden 2008). The idea of JT is an attempt to articulate such principles by linking the dimensions of climate action with principles of social fairness. While various meanings and interpretations of JT have emerged with its evolution and wider adoption beyond the labour movement, these moral philosophical arguments remain common and embedded to the different viewpoints. In this respect trade unionists, environmental justice advocates, moral philosophers, and sympathetic governments are able to find common ground. Differences in JT interpretations tend to revolve around three key areas: (1) the balance between social and ecological 'fairness'; (2) the role of the state and the type of state formation required to achieve JT; and (3) policy provisions and action. Each of these will be discussed in turn.

Climate crisis requires immediate action, but social adjustments take time. Depending upon variant theoretical inclinations and primary concerns, the balance between social and ecological concerns may vary. This tends to be the situation within the broad JT literature. Trade unions, for example, tend to place a greater emphasis on social fairness than ecological outcomes. JT was developed by the union movement to remind governments, environmentalists and others about the social implications of environmental protection. Unions, drawing upon their long legacy of assisting workers and communities impacted by industrial change, redundancies, and facility closures worked to provide a voice for those potentially disadvantaged by environmental policies. Workers employed in 'polluting' industries, they argued, should not be expected to pay the highest social costs for desirable and necessary environmental protection. These arguments were an extension of 'fairness' principles used by unions when negotiating termination and redundancy clauses with employers. The argument being that retrenched workers, who have made contributions to an organization's success, deserve to be supported as they are forced to find new ways to make a living. In seeking fairness, unions advocate for wage support, retraining subsidies, and relocation benefits to help workers find new employment. They also insist the jobs workers transition into should be 'decent', well-paying, and equivalent to the jobs they have lost. For example, the European Trade Union Institute, as noted by Abraham (2017), includes five key elements in their definition of JT:

Social dialogue among representatives of all actors involved in the industrial change, the guarantee of good jobs for people laid-off in the transition, access to retraining for redundant workers, a strong welfare state to cushion those impacted, and respect for the right to a union. (pp. 222–223)

Unions call upon guiding norms, calculated planning, and proactive policy-making that includes regional revitalization strategies in cases where whole communities are impacted (Australian Council of Trade Unions [ACTU], 2011, 2016; ITUC, 2006; Trades Union Congress [TUC], 2008). Unions thus acknowledge the need for environmental action but expect compensation for their members and impacted communities.

Other JT literature places greater emphasis on sustainable ecological outcomes. A common theme within the JT literature is an emphasis on workforce transition from 'dirty' to 'green' jobs (Diesendorf, 2009; Rathzel & Uzzell, 2013). The emphasis here is that JT must include shifting economies, industries, and workforces onto more ecologically sustainable pathways through stimulating environmentally desirable industries. The example frequently used to make this case is Germany which, when it closed many of its coal-fired power stations, assisted workers to find employment in the renewable energy industry (Abraham, 2017; Galgoczi, 2014; Miller, Iles, & Jones, 2013). Environmental organizations also point out the emerging job opportunities in the 'green economy' and

their ability to revitalize disadvantaged regions. While many unions have embraced these interpretations of JT, others have questioned the quality of many 'green' jobs and the value in categorizing jobs as 'green' (Goods, 2011; Snell & Fairbrother, 2010; Stevis, 2013). Despite these notable conceptual differences, JT has served to open up a meaningful discussion between unions, environmentalists, and others on how best to mitigate the social fallout from necessary environmental policy changes and generate jobs (Obach, 2004).

The second key difference found within the literature concerns the role of the state and the particular state formation required to achieve a JT. Conceptually, JT has been adopted by different political perspectives and thus has become more than simply a moral argument but a statement about the role of the state, the capitalist social formation, and the relationship between capitalism and ecological disaster. What is common in this debate is a critique of the free market's ability to deliver 'just' outcomes and a call for a more interventionist state. There is considerable disagreement, however, on what type of intervention is required for realizing a JT. For some, it is a call for a 'green' Keynesian intervention, such as in the advocacy for a 'Green New Deal', while for others it requires the complete transformation of the social relations of production and state formation as expressed in ecosocialist perspectives (Schwartzman, 2011). This paper does not allow for the full interrogation of these different perspectives but it is important to highlight some of the practical challenges that emerge from these differences. Is JT only possible in a post-capitalist society or is JT simply a response to market failure in capitalist societies where 'creative destruction' leaves significant social and environmental disadvantage? Is it only the state that is capable and/or responsible for delivering JT outcomes?

These questions bring us to the third key point of difference in current interpretations of JT, which relates to policy provision, action, and responsibility. A common theme in the literature, which is related to the previous point, is that responsibility for JT resides with the state and more specifically government. The extensive focus on aligning JT to a particular government intervention is for many JT advocates what is required to translate theory into practice. JT advocates, both union and more environmentally inspired versions, have therefore exerted considerable efforts in lobbying for JT policy provisions at the international and national levels (Breacher, Blackwell, & Uehlein, 2014; Felli, 2014). Unions and others have been successful in performing this role. The fact that the Preamble to the Paris Agreement embraces JT (UNFCCC, 2015) and the ILO has adopted JT guidelines (2015) is testament to their success. Within the literature, however, there are different views on what is required to achieve JT policy outcomes. For some, versions of JT coalitions between unions and environmentalists are critical components if alternative ecologically sustainable industries and jobs are to be created. The importance of 'blue-green alliances', however, is not found in all interpretations of JT. How necessary 'green jobs' and/or unions working with environmental organizations are in realizing a JT is one question explored in the following case study.

Before turning to the case study, there are two points to make about the focus on policy provision and government assistance found within the JT literature. First, the overarching assumption within the JT literature is that community, industry, and worker disadvantage emerges out of changes to government environmental regulation (e.g. carbon tax, promotion of renewable technologies over fossil fuels, etc.) and thus governments are responsible for ensuring a JT. This focus on government environmental policy overlooks the role of private enterprises as environmental policy agents and their responsibilities to communities and workers when making environmental policy decisions. The business literature provides strong evidence for the ways private firms are finding innovative solutions to addressing environmental problems through technological innovations, changes to supply chain and procurement policies, adoption of alternative work practices, facility investments and divestments (Boutilier, 2017; Kolk, 2016; McNeil, 2009). These initiatives have led some to suggest private enterprise, not government, is leading on climate change mitigation (Gies, 2017). While such a position is debatable, divestment from fossil fuels by some financial institutions and energy companies has assisted in moving the global economy towards lower emissions technologies. The environmental policies and positions of private firms, particularly those related to investment and divestment, are therefore important to consider in relation to JT as these decisions also directly impact on workers and communities. As the case study presented in this paper highlights, the obligations of businesses to workers and local communities when pursuing an environmental agenda needs to be more fully considered in the JT debate. It is also worth noting that there is a small body of management literature related to responsible restructuring and facility closure management. This literature dovetails with the concerns of JT in that it makes the case for firms to better assist their soon-to-be retrenched workers into alternative employment through upskilling and retraining provisions, employment and job assistance, and mental health counselling (see Butler, Sweeney, & Crundwell, 2009; Cascio, 2005). Encouraging firms to adopt such practices is therefore an additional avenue for implementing some of the tenets of JT. The role and responsibility of private sector actors, however, is surprisingly absent from much of the current debate about JT.

Finally, the perception among advocates that governments are primarily responsible for delivering JT outcomes (see Breacher et al., 2014; ILO, 2015) has prevented unions (and other social actors) from articulating other ways and opportunities to become actively engaged in the JT process. This is surprising given that unions have proved to be effective environmental actors in other areas. Hampton (2015), for example, documents the ways British unions, through the formation of 'green reps', are working to reduce waste and energy usage in many workplaces. Similarly, Markey, McIvor, and Wright (2016) illustrate how Australian unions have used the bargaining process to reduce carbon emissions in Australian workplaces. These studies highlight the innovations and capacity building occurring among unions to become effective environmental actors. When it comes to the specific issue of JT; however, innovation does not extend much beyond the policy advocacy level. The following case study provides some insights into how, when pursuing JT for its members, unions can expand their 'repertoire of action' (Levesque & Murray, 2013) and capacities beyond policy provision advocacy.

The case study method

To investigate the relationship between the 'theory' of JT and its application, I adopted a case study approach informed by 'organic public sociology' (Bonacich, 2007) utilizing 'action research' and unstructured participant observation methods (Dahlke, Hall, & Phinney, 2015; DeWalt & DeWalt, 2011; Lindlof & Taylor, 2011). The case study draws upon my experiences living in a carbon-exposed region for over 15 years and working with unions as an executive member of the local labour council (The Gippsland Trades and Labour Council (GTLC)) in trying to find JT solutions for a local community dependent on the burning of low-grade fossil fuels. The GTLC is a union confederation with 24 affiliated unions across a range of industries (e.g. power generation, manufacturing, health and community services, education, public services, etc.) that represent approximately 12,000 members. The Council meets monthly to discuss and respond to regional developments and community concerns. It works with affiliated unions on industrial matters when called upon but otherwise performs a community role by hosting and becoming involved in community events and activities including those related to climate change awareness and action. During this period, I worked with the GTLC to develop a series of Climate Change Forums aimed at bringing together unions, environmental organizations, community groups, and local and state government representatives to discuss climate

change and the implications of climate change policies for the local community. As a researcher, I have been involved in a number of government-funded research projects aimed at better understanding how low carbon economy policies will impact this region and its workforce (see Fairbrother, Snell, Bamberry, et al., 2012; Fairbrother, Snell, Cairns, et al., 2012). Most recently, I worked with the GTLC and the state government in developing a worker 'transition' centre for assisting workers disadvantaged by the closure of the region's most polluting power station. It is this most recent work upon which this paper focuses.

The research data collected have occurred through an unstructured participant observation method involving complete immersion and participation in the GTLC and engagement with Latrobe Valley power industry unions. Active participation has enhanced my understanding of the challenges associated with JT for this particular context and the role and agency of unions in the process of transition. As noted by Lindlof and Taylor (2011) such techniques provide first-hand experience and understanding of complex social settings. Participant observation, however, can raise significant ethical concerns particularly related to the handling of confidential information and the vulnerability of participants (see Dahlke et al., 2015; DeWalt & DeWalt, 2011). The data and information referred to in the case study draw upon my involvement in JT activities in the region. What is reported, however, is largely publicly available and has been approved by the GTLC for publication. In an effort to protect the privacy of participants, the details of specific individuals and their role and/or position on particular issues have not been disclosed.

The Latrobe Valley case study

The case study for this paper focuses on Australia's Latrobe Valley, a region located about 100 miles east of Melbourne which has served as the principal producer of inexpensive electricity for the State of Victoria's economy. The region contains vast reserves of lignite (or 'brown coal' as it is locally referred) that were first developed by the Victorian Government-owned State Electricity of Victoria (SEC) soon after the First World War. During its lifetime, the SEC operated as a vertically integrated public utility owning and operating open-cut coal mines and associated power stations in the Latrobe Valley and power distribution and retailing businesses throughout the state (Snell & Schmitt, 2012). Up until April 2017, the Latrobe Valley's three vast open-cut coal mines (Yallourn, Loy Yang, and Morwell) and four brown-coal-fired power stations (Hazelwood Power Station, Yallourn Power Station, Loy Yang A Power Station, and Loy Yang B Power Station) were responsible for generating over 85–90% of the State's electricity. However, the privatization of the SEC and associated Latrobe Valley mines and power generators in the 1990s means that today the industry is almost exclusively owned by multinational energy corporations headquartered outside Australia. This privatized industrial context presents particular challenges for managing the social, economic, and industrial transition to cleaner forms of electricity generation (see Snell & Schmitt, 2012).

While Victoria's brown coal electricity generation industry has proved reliable and inexpensive compared to other energy options, the energy content of brown coal is relatively poor compared to other fossil fuels (e.g. black coal and natural gas) and the coal's high water content contributes to additional inefficiencies. These properties have the accumulated effect of making brown-coal one of the highest carbon-intensive fossil fuels and a major contributor to Australia's reputation as one of the world's highest emitters of carbon dioxide on a per capita basis (Diesendorf, 2009). Consequently, much of the political debate within Australia over the past decade about needing to curb the country's carbon emissions has focused upon the Latrobe Valley's ageing power plants. A range of environmental organizations has targeted the region's power stations over the past decade, in various campaigns calling for their closure (ABC, 2010; *The Age*, 2010; *Gippsland Times*, 2008; Greenleft, 2010a, 2010b). The 1600 megawatt Hazelwood Power Stations, the Latrobe Valley's oldest and second largest producer of electricity in Victoria, has served as the primary target of their campaigns.

For much of the past decade, Australia's policy approach to addressing climate change and lowering the country's carbon emissions has been fraught with political divisions contributing to paralysis and uncertainty for those involved in the energy sector. This political uncertainty has occurred at both the Federal and State levels (McNeil, 2009). However, various Federal and State governments introduced policies aimed at increasing the proportion of renewal energy supply and to introduce emissions trading schemes. Most of these policy initiatives have been pursued by Australian Labor Party (ALP)-led Governments during which the Australian Green Party has wielded some influence in getting legislation through Parliament. In 2011, the Gillard-led ALP Government succeeded in passing a Clean Energy Bill which introduced a carbon pricing and reduction policy framework, including a programme aimed at the early retirement of some of the nation's most polluting power generation assets (Australian Government, 2011). Commonly referred to as the 'contract for closure' programme, three Latrobe Valley power plants, including Hazelwood, engaged in negotiations with the Gillard Government about the purchase and closure of their assets (Latrobe Valley Express, 2009). The purchase price requested, however, was deemed as unreasonable by Government negotiators and the programme ended with minimal outcomes (McRae, 2012a, 2012b). In the 2013 Federal election, the conservative Tony Abbott-led Coalition government came to power and repealed the Gillard Government's carbon reduction scheme. Under the Abbott-Government, and the more recent Turnbull-Coalition Government, fossil fuels have been given a reprieve with the Government committing to provide additional support for 'clean coal' technologies and openly criticizing some states for their 'reckless' pursuit of renewable energy targets (Scott & Williams, 2016).

In the Latrobe Valley, unions, through the GTLC, began to hold in 2007 a series of Climate Change Forums that brought together national and state secretaries of the region's major unions, environmental organizations, local community groups, and local and state government representatives to discuss the future of the region in a carbon-constrained environment and how best to manage a JT for impacted workers. The Latrobe Valley's local government (Latrobe City) formed its own 'low carbon economy transition' committee and began to articulate policies around structural adjustment and JT (Latrobe City, 2009). A range of reports was commissioned by state and federal governments to better understand the impacts of low carbon economy policies on the region (see Fairbrother, Snell, Bamberry, et al., 2012; Fairbrother, Snell, Cairns, et al., 2012). Ultimately, however, the first major change came about not as a result of government policy or environmental activism but due to the corporate business decisions made overseas. In November 2016, the Paris-based Engie and its investment partners (Mitsui and Co. of Japan) announced their decision to close their jointly owned Hazelwood Power station. According to Engie's public statements, the company made this decision in order to reduce its carbon emissions and involvement in coal-fired power generation and as a consequence of the power station's age, high operating costs, and the substantial investment needed to upgrade the facility. Rumours about the announced closure had spread among Hazelwood workers and the local unions months ahead of the official announcement from Paris but there had been a general expectation that the company would introduce a staged closure of Hazelwood's eight generation units over several years. The announcement of the complete closure with less than five months to prepare for it came as a major shock to the Hazelwood workers, unions, and the local community. The years of work discussing and preparing for industrial change by local unions and the local community ahead of this announcement, however, meant unions, the GTLC, and the state government were fairly well positioned to develop a response.

'JT' in the Latrobe Valley: putting theory into practice

Soon after Engie's announcement, the State government responded by establishing a Latrobe Valley Authority (LVA) based within the region and began to engage unions, Engie and other power station owners, local government, and community organizations. One of LVA's core roles was to work with and assist disadvantaged workers to find alternative employment (see Victorian Government, 2017). Four major initiatives evolved for assisting impacted workers and their families.

First, a Worker Transition Service (WTS) was established involving a partnership between the LVA and the GTLC and local employment service and training providers. The WTS was made available to all employees of Hazelwood Power Station, associated contractors, supply chain employees, and their family members. It was set up in the GTLC and LVA offices to provide one-on-one transition services and advice related to skills, training, financial advice, and employment assistance. The GTLC's service is based upon a peer-to-peer support model and includes ex-Hazelwood workers employed as peer support officers. These peer support officers work to identify the needs, challenges, and interests of workers and advocate for them by negotiating with training providers to offer training courses and introducing them to other employment service providers. A large proportion of Hazelwood's workers are 40-50 years of age, have no formal qualifications, have highly specialized skills not easily transferable to other industries, have only worked for Hazelwood since leaving school, and have little understanding of how to search for work (see Snell, Schmitt, Glavas, & Bamberry, 2015). Given these characteristics, power industry unions maintained that many of these workers would struggle to find alternative employment and aimed to engage these workers and their family members early. The GTLC operated this service on a volunteer basis from November to March, engaging over 300 Hazelwood workers in the programme and subsequently negotiated state government funding for a further two years of the programme until 2019.

The second initiative involved financial support for retraining. Under Hazelwood's collective agreement with unions, workers directly employed by Hazelwood were entitled to retraining funding provided by the company. This funding, however, was not available to the hundreds of contract and supply chain workers dependent on Hazelwood. The Federal government agreed to provide subsidised training support for all Hazelwood workers including contract workers and for the first time in Australia also offered this training support to spouses. The aim was to enable households to make the decisions about how best to take advantage of retraining opportunities.

A 'Worker Transfer' scheme developed by the three main power industry unions (Construction, Forestry, Mining and Energy Union (CFMEU), the Australian Manufacturing Workers Union (AMWU), and the Electrical Trades Union (ETU)) represents the third initiative. The National office of each of these unions held policy positions advocating for JT (see AMWU, 2008; CFMEU, 2008; ETU, 2009) but it was left up to local organizers in the Latrobe Valley to translate these policies into practical solutions. The Latrobe Valley Worker Transfer Partnership Agreement between unions, power generators, and the government opened up job opportunities for Hazelwood workers who wanted to remain working in the industry. As a way to facilitate access to jobs by Hazelwood workers at other power stations, the scheme introduced an early retirement scheme by the other power stations. Workers wanting to retire early were provided a 'sweetener' paid for by the state government with the expectation that the power station would then replace this retired worker with an ex-Hazelwood worker. It is expected that 100-150 displaced Hazelwood workers will be assisted into alternative power station employment through the scheme. According to union and government representatives involved in the negotiations with the companies who owned the remaining generators, the companies were less than enthusiastic about the proposal. However, following media pressure from the Government and negotiations with the unions, all generators have now agreed to participate.

The fourth initiative focuses specifically on growing jobs and regional revitalization. JT requires employment outcomes for displaced workers which is not easy in a region already suffering high unemployment prior to the Hazelwood closure and largely dependent on power generation. In acknowledgement of these challenges, the State government established Victoria's first 'special economic zone' in the Latrobe Valley which provides financial incentives for new businesses including exemptions from state and local fees and charges for property purchases and business expansions and tax deductions for those creating jobs for ex-Hazelwood workers. The State government and the LVA also attempted to stimulate jobs through public sector job creation and the financing of small local government construction projects. The Latrobe Valley Economic Facilitation Fund was also established to help local businesses expand and increase employment. A locally based solar system installation firm, for example, received government funding to expand its operations and invest in new technologies by promising to create 14 new full-time jobs and provide training opportunities for ex-Hazelwood and contract workers (see LVA, 2017). This initiative aligns well with JT advocates who call for retrenched 'dirty' workers to be redeployed in 'green' industries but it is one of the few illustrative cases where this has occurred. Considerable local interest remains focused on finding alternative uses for the region's brown coal deposits. For example, Latrobe City Council is currently advocating for the building of a new coal-fired power station in the region using carbon capture and storage technologies (Latrobe City, 2017). Realistically, few in the community think this will ever occur in the current carbon-constrained environment but the view is that a new power station could utilize existing skills and would better deliver the high-wage, secure employment which the region has lost rather than other 'greener' options. The GTLC, given its strong membership within the power industry, has been careful to neither embrace or reject proposed new coal projects or more 'green' agendas. At one point, the GTLC actively supported a proposal to establish a workers' cooperative manufacturing solar hot water systems. Concerns about the direction and viability of the project and differences over the proposed business model, however, resulted in the GTLC eventually withdrawing formal support. At other times, the GTLC has endorsed coal projects which propose to generate employment through alternative uses of brown coal, such as a proposed fertilizer facility, and pilot carbon capture and storage projects. The preparedness of the GTLC to lend support to coal projects has not always pleased the environmental movement but there is also recognition among many environmentalists that in a coal region, where jobs are in decline and unemployment is on the rise, turning the region (and its union movement) 'green' is no easy task (Miller, 2009).

In the short term, job creation and assisting displaced workers to find alternative employment are the priority. The various measures pursued by the unions and government are making some difference. The worker transfer scheme has already assisted some 70 Hazelwood workers to continue working in the industry, drawing upon their specialized skills. According to data collected by the GTLC, of the 430 displaced Hazelwood and associated supply chain workers that registered to receive WTS assistance, 58% were in employment six months after the closure. The majority of these workers, however, were working in temporary full-time or part-time positions and often in work associated with the other remaining power generators. Many of those currently unemployed were retraining to work in a variety of employment growth areas, including construction, logistics and warehousing, rail and public transportation, and, to a less extent, health and community services. It is too early to tell if the

economic stimulus and other measures will be sufficient to stabilize the local economy and provide secure well-paying job opportunities for displaced workers in the longer term.

Discussion

Six key lessons emerge out of efforts to put JT principles into practice in the Latrobe Valley. The first relates to the importance of unions' building capacity to perform proactive roles throughout all stages of the JT process. Studies have identified a number of ways organized labour can address environmental harm including at the workplace through collective bargaining and 'green' delegates (Hampton, 2015; Markey et al., 2016), education of members about environmental problems (Hampton, 2015; Rathzel & Uzzell, 2013), building strategic coalitions with environmental organizations (Jones, 2008), environmental policy advocacy (ITUC European Trade Union Confederation and Trade Union Advisory Committee to the OECD, 2006), and the pursuit of locally sensitive JT plans (Breacher et al., 2014; ILO, 2015). Realizing a JT requires unions to draw upon these lessons and build capacities that can be drawn upon to bring about environmental change in the workplace while industries are operating but also assisting workers to transition out of industries that are doing harm and needing to be replaced. As highlighted in the Latrobe Valley case study, building a capacity to assist disadvantaged workers with post-closure 'transition' challenges extends their strategic role as both industrial and environmental actor.

The second lesson is that concerns about environmental policy impacts on workers and communities must move beyond a relatively narrow concern about government policy and regulation to also include the environmental policies of private firms. The Latrobe Valley case illustrates the ways environmental decisions by corporations can have similar impacts on workers and communities but without the same degree of democratic input and transparency. When Engie's Paris-based board members made the decision to close Hazelwood they were responding to a number of concerns including the high costs to modernize the plant, international concerns about the contributions of coal-fired power stations to global carbon emissions and the risks associated with carbon exposure to their business. Ecologically, these are decisions to be welcomed. Hazelwood's closure has assisted Australia in lowering its carbon emissions and improved the air quality in the Latrobe Valley for which many in the community are grateful. The approach to managing the closure, however, was less than ideal and caught many by surprise.

The private sector, particularly those operating within 'polluting' industries, is under mounting pressures to improve environmental performance. As businesses make strategic decisions about their environmental footprint they consider a range of issues such as supply chains and environmental technology innovations related to energy efficiency and waste reduction but also their business assets (Boutilier, 2017; Kolk, 2016). Monitoring and understanding how businesses go about 'greening' their operations, particularly those businesses that own strategic assets such as power generation and supply, is therefore critical from both an environmental and social perspective (see Snell & Schmitt, 2012). Advocating that private businesses adopt JT principles when making environmental and business decisions that negatively impact on local communities is one way to begin to advance such an outcome. In similar ways that unions have used the bargaining process to influence decisions on environmental issues (Markey et al., 2016) unions can pursue JT clauses that impose obligations upon employers to better assist disadvantaged workers.

The third lesson relates to strategic planning and social dialogue which are the hallmark of the ILO's Guidelines for a Just Transition (2015). In much of the discourse about JT there is a heavy emphasis on the importance of JT plans and strategic initiatives that aim to protect workers and communities from the most adverse impact of environmental policy change (see ACTU, 2016; ILO, 2015; TUC, 2008; UNEP, 2007; UNFCCC, 2016). The general criticism is that governments, in their efforts to address ecological harm, have not done enough to plan for the social transitions and fallout that emerge from these policy decisions. In the case of the Latrobe Valley, this criticism is certainly valid.

The hardship brought on by the privatization of the Latrobe Valley power industry in the late 1990s was still a living memory for power industry unions, the GTLC, and the broader community. One of the major criticisms, including from the government's own inquiry into the privatization programme, was its failure to provide adequate assistance to the region when thousands of workers were made redundant (Victorian Government, 2000). Unions expected workers to be better assisted when it came to a power generator closure and they prepared and planned for such a scenario as best they could. It was during the 'contract for closure' period, for example, that power industry unions developed the model for the industry-wide job transfer scheme and the GTLC formed an associated but independent Gippsland Worker and Transition and Support Centre. These activities would serve as the foundation for the handling of the Hazelwood closure. The message here is that social dialogue is vital but unions cannot afford to expect governments to formulate JT plans but must formulate and drive the agenda themselves if JT is to be achieved. As the state government did not have a plan for the handling of the closure, government ministers joined with the unions and the GTLC to carry out their proposals.

The fourth lesson relates to the importance of collaboration between unions, government, employers, and community organizations in realizing a JT. Coalition building is a common theme in the JT literature. However, how coalitions are formed and work effectively in these situations are rarely discussed. In the Latrobe Valley case, relations between unions and the government were helped by the fact that the state government was controlled by the ALP at the time of the closure. The government was committed to social dialogue and prepared to actively engage with unions and include them as a social partner. Like other efforts to achieve justice and fairness, JT involves struggle and unions are in a far less powerful position in relation to employers and government to bring about JT. Out of this struggle, however, must emerge a level of consensus between the key actors if just outcomes are to be achieved.

The fifth lesson concerns union purpose and innovation. JT requires unions to innovate and move beyond the traditional industrial model of unionism they have performed when confronted with closure situations. Unions have always advocated on behalf of retrenched workers through collective agreements, ensuring workers receive their entitlements. Formal assistance for retrenched workers, however, has typically ended when workers are terminated. JT is about what occurs to workers postretrenchment. The Latrobe Valley case presents some of the ways unions and union confederations can fulfil a post-closure assistance role for disadvantaged workers. The peer-to-peer case management support model adopted by the GTLC ensures they are able to monitor the mental health of displaced workers and find them assistance if required as well as gather information about worker experiences in retraining programmes, career advancement assistance, and placement. This information enables the GTLC to identify areas where training and employment assistance improvements may be needed and additional interventions required. The aim of this labour market intermediary model is to improve employment opportunities and outcomes for disadvantaged workers which is the ultimate goal of JT (see Benner, Leete, & Pastor, 2007; Dobbins & Plows, 2017; Douthat & Leigh, 2017). The ILO's Guidelines for Just Transition (2015) recognizes the importance of active labour market policies and labour market intermediaries in the JT post-retrenchment assistance

process but has not mentioned unions as performing in these roles. The Latrobe Valley case provides an example of how unions can perform effective labour market intermediary roles while extending their capacities and role in the JT process.

The final lesson to be learned about the Latrobe Valley case study concerns the relationship of solidarity to JT. The real test of JT is the success of disadvantaged workers in finding decent work and the ability to keep families and communities intact. Unfortunately, evidence suggests that the ability for workers to find alternative decent employment after a facility closure is not good. JT, therefore, requires a long-term commitment to regional and employment revitalization (Pape, Fairbrother, & Snell, 2016) and maintaining solidarity with those disadvantaged. Solidarity is at the heart of effective union organization and is built in the workplace but lost following dislocation. The Latrobe Valley case goes some way in finding solutions for maintaining solidarity with workers postclosure and regional revitalization solutions in the longer term.

Conclusion

JT is at a crossroad, theoretically and practically, and coming under increased criticism at both levels. Felli (2014) notes that 'demands to be more specific about the meaning of JT are recurrent' (p. 379). Hampton (2015), on the other hand, makes the observation that 'critics rightly argue that unions need to make JT more concrete' (p. 192). Perhaps the relationship between conceptual ambiguity surrounding JT and the supposed failure to find practical solutions is not as problematic as it is widely perceived by its critics. Conceptual clarity around 'JT' is likely to remain a challenge for some time; JT is a conceptual 'ideal type' defined in diverse ways and informed by variant political perspectives, resulting in multiple and contested interpretations not dissimilar from other inherently political concepts (see Connelly, 2007). The idea of JT, however, has served to advance conversations between unions, environmentalists, governments, and community members on how best to balance ecological and social needs when making critical environmental policy decisions. It is true, as Hampton (2015) points out, that the longevity of this morally based argument depends upon translating these ideas into practical solutions for those communities and workers negatively impacted by environmental policies. However, the definitional inconsistency in JT may provide the flexibility required today to translate theory into practice. Attempts to apply JT are likely to be just as diverse as the conceptualization of JT as local political and economic contextual factors influence outcomes and the manner in which the major actors pursue their understanding of the concept.

At the local level where 'transition' is underway, scholarly conceptual debates concerning JT are subordinate to identifying, developing, and implementing meaningful solutions addressing environmental and social harm. The Latrobe Valley case illustrates a particular attempt to implement JT values and principles during a time of urgency. While the response by government was reactive it was proactive on the part of unions in the sense that they had foreshadowed and planned for this event. The case study shows how JT solutions can begin to be identified and acted upon through cooperation between unions, governments, and employers at a local level. However, the Latrobe Valley case does not meet the more specific conceptual definition, which involves unions and environmentalists forming strategic alliances to promote green transition (Jones, 2008) and workers 'reallocated from grey to green sectors' (OECD, 2011, p. 19). For regions dependent on environmentally harmful industries for their livelihood, this is their greatest challenge. One of the major contributions of the case study has been to highlight the ways unions can embrace new repertoires of action aimed at extending their agency as JT actors throughout the transition process and the importance of bringing private sector actors into the fold of JT responsibilities. The case presented is unlikely to be the first, nor hopefully last, attempt by an impacted community to find equitable and just solutions to situations that were not of their own making. However, it does provide some important lessons about developing an early and rapid response and the importance of unions committing to solidarity and supporting disadvantaged workers for the longer term as they adjust to changing economic and labour market conditions. The more regions like the Latrobe Valley can learn from one another's lived experiences, innovations, and social experimentations in achieving JT the more likely conceptual clarity and 'concrete' solutions may emerge. More importantly, these combined lessons will hopefully make it easier for disadvantaged communities and governments to overcome some of the paralysis in taking meaningful steps to address ecological and climate crisis.

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