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After the Greenfire Revolution: Reimagining Collective Identities of the Future Wildland Fire Workforce in a Paradigm Shift for Ecological Fire Management

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Abstract: This concept paper explores possible collective identities for a future wildland fire workforce. Taking inspiration from the work of futurists who foresee an end to the dominant fire exclusion/suppression paradigm, and assuming an emerging fire restoration/resilience paradigm shift replaces it, the paper engages in speculative explorations of the process and product of this paradigm shift on future collective identities for a workforce doing ecological fire management. Social constructionist assumptions from symbolic interactionist sociological theory, Gramscian political theory's concept of hegemony, and New-Social-Movement theory's concept of collective identity all provide the intellectual foundations for the discussion. This concept paper argues that in order to actualize a paradigm shift, more than advances in scientific research or reforms of government policies will be required--the wildland fire community will need to become (or join) a social movement engaged in collective actions. An imaginary social movement, the "Greenfire revolution," is invented to help illustrate how the selected theories and concepts might apply in the social construction of ecological fire management and the collective identities of its future workforce.

Keywords: new social movement theory; collective identity; wildland fire management; paradigm shift

1. Introduction

Sooner or later, one way or another, the 'war on wildfire' paradigm will come to an end. This is the prediction of a group of futures researchers and wildfire specialists who were tasked by the U.S. Forest Service with mapping out future scenarios for wildland fire management [1]. This "Foresight" panel foresees a paradigm shift from fire suppression/fire exclusion to an emergent fire resilience paradigm that will enable communities to live with fire in fire-adapted landscapes. Three future scenarios were developed: 1) "system collapse" from economic decline and peak oil's inability to continue fossil-fueled mechanized suppression; 2) "inevitable decline" from business-as-usual development sprawling into flammable wildlands along with growing pollution, resource depletion, environmental damage, and climate change that causes conventional fire suppression to be economically and ecologically unsustainable; or 3) an "enlightened paradigm shift" that develops policies and practices for proactive ecological fire management. In each of these scenarios the Foresight panel predicts the 'war' on wildfire will stop because it is ultimately unsustainable.

The kind of "enlightened paradigm shift" briefly envisioned by the fire Foresight panel will entail sweeping social change on cultural as well as political and economic levels. Indeed, a true paradigm shift is more than a change in policies: it represents a change in worldview that embraces new cultural beliefs and behaviors across society. Furthermore, dominant paradigms do not go away swiftly or silently; they require struggle in many social arenas that may unfold over several generations. The paradigm shift has been underway by individuals within western science and State agency circles for several decades, for example, progressive developments in Federal Wildland Fire

Management Policy in 2001 and 2009 are a few markers in this emerging paradigm shift [2,3]. But the U.S. Forest Service still implements aggressive suppression on nearly all wildfire ignitions.

The paradigm shift is obscured because it is found mostly within science and policy documents that don't enter into popular awareness [4]. I argue that top-down reform efforts by scientists and progressive policymakers are necessary but insufficient means of making the kind of sociocultural changes necessary for dethroning fire suppression/exclusion as the dominant paradigm or replacing it with a new mission to restore socioecological resilience. Bottom-up collective actions in social movements will be necessary for making that paradigmatic change.

This extended essay/concept paper will address a reimagining of a future fire workforce in terms of a new collective identity for workers. I apply New-Social-Movement Theory to explain how and why a new collective identity of fire workers as part and parcel of a social movement of the wildland fire community will be a strategic necessity in actualizing the paradigm shift. If wildfire suppression as we currently know it will someday end (as the Foresight futurists foresee), what will replace "fire fighters" as a collective identity for workers? I offer a number of possibilities for reimagining the identities of the future fire workforce that might symbolize an enlightened paradigm shift propelling a new mission of ecological fire management.

2. A Note on Methodology: Armchair Sociological Theorizing from the Trenches

In selecting the theory and concepts in this paper, I draw from my experiences as a former seasonal wildland firefighter, an academic social movement researcher, and an advocate working in nonprofit organizations whose mission is devoted to policy changes needed to promote the safety and well-being of wildland firefighters. I make no claim to value neutrality, and the intent of this paper is not to present empirical data or test theory, but to offer provocative ideas to stimulate new thinking, new research and theorizing. I will confess to a not-so-hidden agenda: I hope to inspire members of the wildland fire community to reimagine themselves as changemakers in a nascent social movement promoting the paradigm shift.

3. Sociological Theoretical Foundations: Symbolic Interactionism

The chosen theoretical framework for this paper, New-Social-Movement theory (NSM theory), is grounded within the sociological theoretical perspective of Symbolic Interactionism (SI theory) [5]. This perspective sees human interaction with the use of symbols as the fundamental building blocks of society. Language (both oral and written), physical gestures (including "body language"), and an infinite variety of objects and actions can be used as symbols to convey meanings, and it is the communication of meanings that enables individuals to function socially within groups and society. Importantly, the meanings of symbols are never singular, permanently fixed, or universal [6]. People must interpret the meaning of any symbolic communication, object, or action, and this interpretive process is affected by the specific social context and group of people. There may be multiple meanings for any symbol, and meanings might be contested among individuals having differing perceptions and perspectives. So the meaning of any single symbol can never be assumed--it must be interpreted, negotiated, and is subject to change.

SI theory takes a radical view of society if not reality itself: both are socially constructed from the bottom-up in social interaction that is fundamentally a subjective and dynamic process. Identities are thus culturally-influenced social constructions that represent interactional achievements rather than structurally pre-determined entities [6]. Collective identities symbolize a set of roles and stereotyped beliefs and behaviors, but these can never be assumed to be fixed or universal among individuals or groups. SI thus offers a pathway for social change: alter the meanings of symbols and you alter the interactions that frame group consciousness and behavior.

Because dominant meanings of symbols are conveyed through culture, people engage in interactions with some pre-existing shared meanings, but again, the same words may mean different things to different individuals or groups. A recent theoretical refinement known as Structured Symbolic Interactionism acknowledges the powerful influence of social structures (like culture and institutions) that frame interactions and guide roles and relations so that every interaction does not

begin *tabula rasa*. Indeed, these social structures make the meanings of symbols and the outcome of interactions fairly durable, usually resistant to change, and capable of reproducing themselves among different groups [7]. But dynamism and the potential for change is always present, always possible.

How does the SI perspective apply to reimagining the fire management workforce? It provides insight into the suite of symbols and meanings that socially construct the collective identity of wildland firefighters. For example, the militaristic language that defines much of the terminology of fire management and its dominant activity of fire *fighting* clearly frames the identity of firefighter. The first response to most wildland fire ignitions is labeled as "initial attack," followed by "extended attack" if that initial response fails to contain and control the fire. There are also direct and indirect attack strategies involved. I spent one of my seasons as a "helitack" firefighter whose identity symbolizes initial attack via helicopter transport. The terminology of current fire management is replete with military metaphors that symbolize the imperative to adopt a combative mentality and relationship to wildland fire. But in accordance with SI theoretical precepts, the meanings of current symbols can change, and new symbols with new meanings can be created. This process will necessarily involve "negotiation" (in the language of SI theory) or "struggle" (in the language of social movement activists) to redefine what it means to be a person who works with instead of fights against fires.

Truth be told, the very notion of fighting fire is a misnomer because firefighters rarely directly fight flames *mano a mano*--they get burned if they do [8]. Instead, crews cut plants and dig up dirt and spray water to affect the fuel, oxygen, or heat components driving combustion. On large wildfires with indirect attack strategies, crews may be fighting fire for several days without seeing any actual flames. So the identity of fire fighters could just as well be changed to "forest fighters" (in the case of forest fires, but not all wildfires are in forests). Much of the work of firefighting handcrews is a glorified form of ditch-digging, but calling crews "ditch diggers" would be offensive and is culturally unacceptable. The SI theoretical perspective provides a basis for understanding the subjective process inherent in the use of symbols, e.g., language, that are the basis for identity formation, explains the powerful influences that certain symbols and meanings have on both individual consciousness and group behavior, and also reveals the possibility for creating new symbols or meanings that would alter consciousness and behavior.

4. Political Theoretical Foundations: Gramsci's "Hegemony"

The Italian political theorist, Antonio Gramsci, provides another important theoretical foundation in explaining the strategic value of creating a new identity for fire workers. His concept of hegemony refers to the way dominant elites and institutions maintain their power and privilege through cultural and ideological means that are often more pervasive if not more effective in controlling a populace than the threat or use of brute force [9]. Through alternating means of subtle coercion and sophisticated persuasion, elites manufacture consent of a populace to the structures of domination, oppression and exploitation that keep them subordinated in society [10]. Hegemonic perspectives become the unquestioned, taken-for-granted, common sense view of reality, and this limits the terms of acceptable debate to make ideas that challenge the status quo become almost unthinkable thoughts [11].

Gramsci's concept of hegemony expands the terrain of social conflict beyond institutional politics or workplace economics to include cultural work and ideological debate as strategic avenues for promoting social change [12]. For example, activists' efforts to create countercultures or engage in consciousness-raising are explicitly counterhegemonic work. In the context of wildland fire management, hegemonic perspectives portray wildfire almost exclusively as a dangerous and destructive force to be prevented at all costs and assumes that it is natural for humans to fear and rational for them to fight fire. These hegemonic beliefs promoting total fire exclusion and systematic fire suppression are currently being challenged by Indigenous cultural burners and prescribed fire practitioners. Indigenous perspectives in particular pose the most far-reaching challenges to the hegemony of settler-colonialist, State-dominated fire management, and have become a major inspirational force propelling advocates for ecological fire management. The framing of Indigenous

fire stewardship as "cultural" burning and views of fire as "medicine" for healing the land exemplifies Gramsci's political theory that gives credence to creating alternative cultural practices and belief systems as strategic means of undermining elite power. Contemporary social movement theory offers another beneficial intellectual framework for understanding the strategic nature of this cultural and ideological work.

5. Social Movement Theories for Reimagining the Fire Workforce

If our vision of the fire management workforce was limited to the near-term future, e.g., 2025, then conventional Resource Mobilization theory and Political Opportunity theory offer excellent explanatory frameworks for understanding the activities of formal organizations like Grassroots Wildland Firefighters, a nonprofit organization that is advocating for legislation to boost the occupational status, pay, and benefits of wildland firefighters. These theoretical perspectives provide useful means for understanding how these efforts at institutional reform might succeed (or fail) over the short-term. However, if we are to embark on an expansive reimagining of a fire management workforce implementing ecological fire management in a new fire resilience paradigm, then realistically we should be looking at a longer time horizon, e.g., 2055. Factoring in likely significant societal and ecological changes due to climate change, far more than incremental policy reforms or small boosts in pay and benefits will be necessary to recruit or retain fire workers now or in the future. Indeed, a radical new mission of fire management will be required, and along with that, a new identity of the workforce. For that project, neither Resource Mobilization theory nor Political Opportunity theory will suffice as explanatory tools for the work of a social movement creating the fire workforce of the future [13].

I argue that New-Social-Movement (NSM) theory provides a better framework for understanding the kind of activities that a future social movement of, for, and by fire management workers will be doing as part of an "enlightened" paradigm shift that will be performing a radically different mission. NSM theory shares the same general assumptions of SI sociological theory and Gramscian political theory, giving priority focus on interpreting the symbolic meanings of counterhegemonic collective actions to challenge dominant ideology and transform cultural beliefs and behaviors [13,14]. In accordance with NSM theory, a prime focus and top strategic necessity of this future movement will be to socially-construct and articulate a new collective identity for wildland firefighters, one that better symbolizes the work they will be doing in ecological fire management. How can NSM theory help understand what a social movement of fire management workers will be doing to advance the paradigm shift?

6. A Burning Necessity: Construct a Collective Identity

According to NSM theory, construction of a collective identity is one of the most central and crucial tasks of a social movement [15–17]. As a strategic goal, critical functions of a collective identity are to facilitate member recruitment; nurture member solidarity and sustain commitment; and empower individuals to engage in collective action. Activists reimagine and construct a collective identity that symbolically conveys the movement's general vision of itself and nurtures a sense of shared membership among individuals [18]. In effect, a collective identity defines "who we are, and what we do" [19]. This identity work is not only vital for building solidarity among members, but it changes individual selves and social relationships in ways that can transcend the explicit instrumental goals of a movement. Individuals who embrace a collective identity are often transformed in powerful ways that continue to shape their sense of self even after their participation in a social movement ends [18]. A movement's collective identity is achieved with conscious intention and yields a sense of empowerment, unlike social identities that are ascribed and can be regarded as oppressive. Indeed, construction of a movement's collective identity is considered an achievement in its own right, regardless of its contributions to other organizational or political goals [11,20].

NSM theory shares SI theory's assumptions that identities are social constructions flowing from dynamic, ongoing interactional processes, which means that they are never essential, fixed, homogenous, or universal [12]. Even with the use of a common symbol or word, the meanings of an

identity can differ and change among individuals, groups, and societies. Thus, in crafting a new collective identity for the fire workforce, it should be assumed that there will be multiple identities according to diverse individuals and groups doing fire management, and this will be a fluid process emerging out of interactions among movement participants and in relation to external audiences including allies, adversaries, media, and the State [18]. Multiplicity of collective identities for workers that unfold within different cultural groups and geographic regions are a likelihood.

New identities can be created, or existing social identities can be redefined, or older identities may be resurrected; regardless, this identity-construction work becomes imperative especially when prior or existing identities have been destabilized by wider social, political, or economic change [21]. Thus, for the sake of argument, if and when conventional fossil-fueled mechanized fire suppression is greatly diminished or no longer possible in accordance with the Foresight panel's "collapse" and "decline" scenarios, then the identities of airtanker, smokejumper, helitack, and engine crews will have to be altered or even abandoned as their tools and tactics are no longer viable. If and when fire "fighting" ends in accordance with an end to the 'war on wildfire' paradigm, the identities of firefighters will also need to change--assuming that there will be a continuing social need and capacity for managing fire even if it is no longer dominated by fire suppression.

Collective identities are not formed in isolation and purely by self-will; rather, they are constructed within a wider social-political-cultural field and are influenced by external forces that create both limitations and opportunities [22]. The role of charismatic leaders functioning as "organic intellectuals [9] or "movement intellectuals" [23] who help shape a movement's internal culture, organizational structure, and political strategies and tactics are key agents in creating and articulating the movement's collective identity. These thought leaders attend to the external factors and forces that affect their movement, and strategically employ rhetoric to articulate their collective identity in ways that shape the perceptions of outsiders, hoping to gain allies and/or neutralize adversaries [19]. The most effective collective identities align with prevailing cultural values and beliefs but alter or apply them in new and creative ways that resonate with public audiences [24].

Development of collective identity in the early formative stages of a social movement may be invisible to outsiders because it is expressed only within the "submerged networks" [15] of members where social interactions occur. These are "free spaces" where a movement's subculture develops and collective identity forms [34]. Here it manifests in the language and symbols used in everyday interactions: words used in conversation, hand and body gestures, fashion styles, group rituals, etc. Stories and storytelling are major means of communicating collective identity within groups although there may initially be multiple narratives that require some dialogue and negotiation to weave into a coherent collective identity [10]. This process in primarily cultural but it is also inherently political in that it entails power--mostly persuasive power--to determine which narratives will prevail. Here again the role of formal or informal charismatic leaders can play an influential role in shaping and articulating the stories that help craft collective identities [25].

One of the goals and achievements of creating a movement's collective identity is "cognitive liberation" [26] from hegemonic social identities that are deemed oppressive. Members struggle for the right to name themselves in opposition to ascribed identities, and free themselves from imposed social roles [27]. This oppositional mindset is paradoxically the basis for a new solidarity when members realize that the only places they can express their new identities is through interaction within the movement's social networks and organizations. But this early phase when an emerging social movement more resembles a subculture is ultimately unsatisfying: members often feel frustrated from an inability to fully express their new identity, live according to their values, or share their beliefs or practices in the wider society. At this point, a "*politicized* collective identity" [28] begins to emerge and a nascent social movement becomes publicly visible in collective action.

A politicized collective identity initiates members' desires to engage in a power struggle in various cultural or political arenas. This politicization process consists of three key components: shared grievances over perceived injustice, adversaries to blame (including elites, institutions, or the System itself), and then connecting these to wider socio-politico-economic structures as alternating sources of and solutions to grievances [28]. Politicized collective identities are the basis for

articulating "collective action frames" [11] that provide the rationale, social locations, strategies and tactics for a social movement to take action confronting power. Whereas Resource Mobilization theory posits the accumulation of material resources and organizational structures are the essential ingredients needed for collective action, NSM theory points to the vital power of politicized collective identities as both the initial spark and the sustaining fuel for mobilizing collective action in social movements [13].

A key insight of NSM theory is that collective identity and collective action are not merely instrumental means of achieving extrinsic ends, but rather, they offer intrinsic rewards in themselves. Engaged in collective action, both "internal" subcultural interactions within a movement's network of free spaces and "external" overtly political protest actions in public spaces, members can express their new collective identity if only fleetingly and never fully without a wider change in society. Collective identity is thus a powerful social-psychological motivational force that serves as both a symbolic resource and a personal reward for collective action [13].

7. Theoretical Abstraction Meets Utopian Speculation: Imagining a Future Fire Movement

Utopian thinking is part of every social movement [29], so in imagining the fire community becoming a social movement to carry forward an "enlightened" paradigm shift, I will engage in some utopian speculation about what an ecological fire management mission might be and do to implement the new paradigm. This will help segue to further imaginative speculations on some of the possible new collective identities this future fire workforce might (re)articulate as they carry out collective actions to actualize their new mission. I will invent a future fire social movement I will call the "Greenfire revolution" [30]. Importantly, I use the word revolution to symbolize a paradigmatic change in worldview, not to imply a violent revolt or overthrow of the State or system. If anything, the Greenfire revolution I imagine will bring an end to violence--the slow violence of fire exclusion or sudden violence of aggressive fire suppression.

From an imaginary standpoint sometime in the future (e.g., 2055) retracing the progression of the paradigm shift, Greenfire's movement intellectuals articulated in 2025 a radical change in wildland firefighters' mission: "we should not fight another fire; instead, we should manage every fire." Through active fire management, the goal would be to maximize the ecological benefits of burning while mitigating the social risks and hazards on human communities, and minimizing the socioeconomic costs and environmental impacts of current-day conventional fire suppression. In effect, the core activity and mentality of workers would change from fire fighting to fire lighting.

As part of a generalized cultural crisis that spawned a proliferation of social conflicts in the 2020s, the Greenfire revolution attracted members from several social movements who were simultaneously struggling against hegemonic ideologies and institutions. Thus, Greenfire activists identified with the labor movement as fire workers demanded better pay and benefits, and safer working conditions that they realized depended upon restoring fire-prone landscapes--the working environment of fire crews. Members of the environmental movement were also part of Greenfire as conservation-minded citizens demanded restoration of fire-adapted habitats and ecosystems in order to preserve fire-dependent species that had seriously declined from decades of fire exclusion and suppression. The Greenfire revolution also identified with the peace movement as firefighter fatalities kept rising, and parents demanded an end to the "war" on wildfire that was needlessly sacrificing the young lives of their sons and daughters in too many futile firefighting actions.

The Greenfire revolution also involved members from a rural communitarian anarchist movement who were organizing local "fire militias," leaderless voluntary associations of residents committed to mutual aid. These groups started out doing emergency firefighting but quickly shifted to fuels management and controlled burns that were surreptitiously organized and conducted like direct actions. Greenfire also included many members identifying with social justice movements as the demographics of fire crews changed from what had historically been an overwhelmingly white male majority to rapidly become a multi-racial, multi-ethnic, multi-gender workforce demanding equity in status, compensation, and power. An especially motivating cause was the struggle by Indigenous peoples demanding the right to use fire to steward the cultural resources and sacred sites

of their ancestral homelands. Indeed, Indigenous perspectives provided core inspirational elements in the emerging philosophy and practice of ecological fire management. Native peoples simply asserted their sovereignty, conducting cultural burns in the times, places, and conditions that conformed to their traditional ecological knowledge. The anarchists' direct action burning and Indigenous practitioners' cultural burning were both done without government regulation or permission, in defiance of agency authorities, thereby ending the State's longstanding monopolization of fire management.

Since wildfire activity was surging under the influence of climate change, and the crisis of urban wildfire disasters was escalating beyond the government's capacity for fire prevention, suppression or recovery, the Greenfire revolution drew more and more people into its ranks who were both directly or indirectly affected by fire. A growing number of people were affiliated with other social issues and movements, and the Greenfire movement incorporated aspects and involved members from these other social movements that were all part of a great wave of collective actions propelling social change.

The hegemony of the war metaphor was not overthrown as much as it was abandoned-- conditions on the ground had made it moot. Making warfare on wildfire was no longer sustainable or socially acceptable. The need for some manner of fire suppression still continued, especially where wildfires encroached upon vulnerable human communities or infrastructure, but aggressive suppression in remote wildlands was no longer automatic. Decisions about when and where to dispatch fire crews became more strategic and selective based on scientific risk assessments and subjective judgements of values. Calculating risk was no longer exclusively about the negative impacts of fire, but became balanced by equal considerations for the beneficial effects of fire and the long-term risk from failing to reintroduce fire into landscapes deteriorating from a fire deficit. These developments and more strained the usefulness of the war metaphor.

While ongoing advances in fire ecology research and progressive policy reforms were making the intellectual case for a paradigm shift, the real change was happening on the ground when firefighting crews started refusing suppression assignments that they believed were not only unsafe but also ecologically unsound or a huge economic waste. They began to reject futile "performative firefighting" actions and the renounced the role of suppression soldiers unquestioningly obeying orders from above. They were still more than willing to take risks and work hard, but not in the same way or for the same reasons as conventional suppression. In effect, firefighting crews were voting with their feet to end the war on wildfire.

Movement intellectuals began redefining the concept of suppression, altering its dominant meaning to contain and control fire, to instead mean mitigating fire behavior to reduce fire intensity and severity, not fire size. This changed the focus of suppression efforts from attempts to stop fire spread at all costs to actions to steer fire spread into areas where, for ecological restoration purposes, burning was beneficial. On the same fire, crews could steer flames away from vulnerable human structures and communities. This philosophy of managing wildfire for multiple objectives, including both protection and restoration, had long been official federal policy since the early 2000s [2,3], but it had rarely been implemented while social and political pressures had demanded total suppression. It also shifted the bulk of work away from suppressing wildfires to managing fuels and vegetation. This necessarily required the use of fire in a variety of forms: prescribed fuels burning, Indigenous cultural burning, and suppression firing operations during wildfires. Fire crews started more of these kinds of fires than they attempted to stop wildfires. Thus, the fire management workforce shifted their intentions and actions from attempting fire exclusion (i.e., stopping fires) to facilitating fire inclusion (i.e., starting and steering fires), adopting more of an Indigenous model of fire stewardship in contrast to the Imperial model of fire control.

This revolutionary change in fire management philosophy was articulated by a number of voices but was fundamentally implemented by the workforce that had now expanded far beyond government agencies to include a wide variety of non-governmental organizations and volunteer community groups, all identifying in some way with the aims of the Greenfire revolution to restore socioecological fire resilience and sustainability. Workers consciously rejected the militaristic mindset

and hierarchical organizational structure of firefighting, and along with that, were alienated from the symbolic meanings that defined the identity of a "fire fighter." In the fire camps where storytelling is the great pastime of weary crews resting at the end of their work shifts, new collective identities began to emerge, connected to the collective actions they were conducting in a new mission of ecological fire management.

Thus ends my imagining of the future social process by which the current hegemonic identity construct of wildland firefighter would be dethroned as part of an enlightened paradigm shift, allowing new identity constructs for fire workers to arise. I will now embark on another speculative journey to envision some possible collective identities that fire workers might adopt, and briefly sketch out the narrative storylines that would relate each identity construct to the different tasks that workers might perform in a new ecological fire management mission. Given the diversity of peoples who will be managing fires along with the diversity of geographies and cultures, a plurality of collective identities should be anticipated if not welcomed. Indeed, some identity pluralism may be very adaptive to likely changing social and environmental conditions ahead [31]. Collective identities that somehow connect with existing identities that resonate with popular culture and social values will more likely succeed in a social movement's need to establish legitimacy, recruit new members, and gain allies [19]. Entirely new names for collective identity constructs could also be invented, so the following list and descriptions are neither exhaustive nor definitive. Ultimately it will be up to future fire workers and their communities to define which collective identities best symbolize the new meanings of their collective actions.

8. New and Renewed Collective Identities for the Ecological Fire Management Workforce

Social movements construct symbol systems, and collective identity is a vital symbolic resource that forms from and feeds into collective actions. Movement strive to with great intentionality to create collective identities that symbolize their members' consciousness and collection actions, but they don't invent these identities or symbols out of whole cloth [32]. From a recruiting standpoint, the best symbols to use are ones already rooted in popular culture that generate positive support. But every shared identity has contradictions and potential tradeoffs that may conflict with elements of a movement's ideology or specific portions of its membership [31]. So what collective identities could be adopted and rearticulated in ways that would, first, be positively accepted by wildland firefighters, and secondly, resonate with supporters and allies in symbolically expressing the visions and values of a "Greenfire" movement? The following are a few ideas for possible identities that are neither suggestions nor predictions, but rather, questions given the inherent complexity and internal contradictions of collective identity constructions.

8.1. Fire Crews as Cowboys?

Within the firefighting community, incident commanders who are labeled "cowboys" symbolize that they are aggressive risk-takers to the point of recklessness, and often shirk accountability for wasteful or destructive suppression decisions and actions. It's not a desirable label, but the popular image of the work of cowboys echoes a tactical term for managing wildfires in the early 1900s: "loose-herding" fires. This concept comes close to articulating the way that wildfires will be ecologically managed particularly in remote wildlands. Crews will be loose-herding wildfires not necessarily to "corral" them, but to steer them into suitable terrain within a strategy of confinement, while at the same time preventing the fires from "stampeding" out of control.

The cultural image and historical legacy of cowboys are a mixed bag: they live and work on the land and are admired for their rugged independence and are a symbol of freedom. But they also played an active role in colonizing western wildlands and the genocide of Indigenous peoples. Certain segments of the public may have an affinity for cowboy identities, but others do not. Cowboys might symbolize fire crews managing rangeland fires in the western U.S., but they will not likely be a candidate for a general collective identity of crews engaging in ecosystem restoration.

8.2. Fire Crews as Indians?

How about Native Americans or "Indians"? Currently, Indigenous perspectives are playing a major inspirational role among fire practitioners and social justice activists. Fire exclusion policies and the criminalization of Indigenous cultural burning are increasingly viewed as institutionalized environmental racism and honoring the Tribes' sovereign rights to steward the land with fire is seen as a matter of restoring environmental justice. There is much that society could relearn from Native communities about living and working with fire on the land. Indigenous fire practitioners are offering to share some of their traditional ecological knowledge but are wary of it being taken and either exploited or ignored. They strongly resist cultural appropriation of their fire knowledge and practices. At the same time, Indigenous communities face some of the worst impacts of contemporary wildfires, and are desperate to see more good fire on the ground to heal the land from the degradation of fire exclusion. There is recognition that Indigenous fire practitioners and government fire agencies will need to collaborate in fire management, and some kind of merging of Indigenous ecological knowledge and western fire ecology science is desirable.

In my opinion, Indigenous perspectives will have a vital influence in developing the philosophy and practice(s) of ecological fire management. Most prescribed burning conducted by government agencies is done for a narrow range of purposes, predominantly for fuels reduction. Cultural burning, on the other hand, has a multitude of purposes and intentions, most of them tending to the needs of specific fire-dependent plants, animals, or habitats. And while prescribed burning is performed as a technical operation with geared up certified wildland firefighters only, cultural burning is more of a craft skill done with family and community members of all ages and physical abilities. The other important distinction is that cultural burning often includes ceremonies, songs, and prayers that nurture a spiritual connection with fire or the land; prescribed burning does not involve any of those things. The kind of philosophy, practices, and purposes I envision in ecological fire management is articulated best by advocates for Indigenous cultural burning, and some identification with "Indians" seems almost certain to me.

It may not be appropriate for non-Indigenous fire workers to adopt the collective identity of "Indian" to symbolize their collective actions, but it is worth reminding ourselves that early Euroamerican explorers and settlers learned from Native peoples about the use of fire on the land. Aptly named trailblazers, farmers, ranchers, even timber cutters all adopted fire use for various resource objectives and called it "the Indian way." In fact, the U.S. Forest Service had to work hard to impose its fire exclusion doctrine on both Indigenous people and white settlers. The agency dismissed fire use as "Paiute forestry," intended as a racist pejorative. While non-Indigenous fire crews may not be willing or able to call themselves "Indians," most certainly that will be a basis for the collective identities of Indigenous fire practitioners doing cultural burning as part of the wider social movement for ecological fire management.

8.3. Fire Crews as Shepherds or Stewards?

Would shepherds or stewards work well as new collective identities for firefighters? Although these identities might better symbolize the monitoring work of certain wildland fire use tactics, images of shepherds passively watching over tender flocks of flames misses something important to many individuals attracted to present-day firefighting: the adventure and adrenaline rush of working alongside uncontrolled flames. They enjoy the thrill of jumping out of airplanes, flying in helicopters, hiking in steep rugged mountains, cutting and digging line alongside wild fire. This desire has been channeled into a macho bravado that dominates firefighter culture and is sustained by the militarist discourse of fire management. But over time the growing gender diversity within the ranks of fire crews should sever the connection between adventure, bravery, and male machismo. Nevertheless, in the near term it is doubtful that firefighters would accept trading away their heroic warrior identity for that of a passive shepherd or steward.

Given the influence of climate change, most wildfires will not behave like tame sheep and fire management will not be a passive "spectator sport." Ecological fire management will require active management, but this does not necessarily mean it has to be "aggressive." There will still be a need

for suppression actions to protect vulnerable communities and structures, and every fire management action has inherent risks and hazards. Fire workers will need an empowering identity that addresses the need for bravery and hard work in both stewarding and suppressing fires. While fire shepherd will not likely to be a favored identity--with the exception of actual shepherds whose traditional use of fire helps improve grazing habitats for their herds--the concept of fire steward has more potential for becoming a collective identity for future fire crews because it clearly symbolizes the intention to take care of the land by using fire. The change in collective identity from soldiers to stewards will be a fluid process subject to many permutations, but a positive sign from the recent pandemic was the association of frontline health care workers as brave heroes. Indeed, the collective identity of fire stewards restoring resilience to communities and ecosystems will need to articulate that healers can be heroes, too.

8.4. Fire Crews as Rangers?

According to a large scientific survey in 2008 commissioned by the National Wildfire Coordinating Group, wildland firefighters had the most public credibility to speak on wildfire issues, but the next most-favored occupation were park and forest rangers [33]. What if crews were identified as fire rangers? In fact, Ontario, Canada has been calling its wildland firefighters "fire rangers" since the late 1800s, but their work is exclusively focused on wildfire prevention and suppression. On the other hand, Indigenous rangers in Australia use fire to remove invasive plants and restore native desert ecosystems. There is also a fire ranger in the pantheon of Power Rangers (superheroes in a kids' television series), but he is a warrior who wields fire as a weapon. The above real and fictional examples demonstrate that there is nothing essential about identities—there can be multiple meanings and definitions, and they all must be carefully defined and articulated.

Most people think all U.S. Forest Service and National Park Service employees are rangers, however, the NPS allows its seasonal staff to wear the badge of ranger, but the USFS reserves the label of ranger only for its permanent staff of line officers. Given these institutional differences between two of the dominant fire agencies in the U.S., it should be expected that at least one agency will resist a social movement adopting fire ranger as a collective identity, and for good reason: the name has cultural power among a wide body of the public.

As attractive or appealing as it initially sounds for fire crews to identify themselves as fire rangers, the association with federal agencies and their roles in settler colonialism and fire suppression bring some negative implications, too. Simply renaming firefighters as rangers could be linked in some peoples' minds with USFS firefighting or NPS policing rather than fire use for ecological restoration. In the near term, re-identifying firefighters as fire rangers offer much potential for symbolizing the full spectrum of possible roles and duties needed for government agency fire workers, but there are limitations to its longterm desirability and use in the future.

8.5. Fire Crews as Fire-Lighters, Fire-Guiders, or Pyrotechnicians?

Another set of identities that might be favored by a broad range of fire workers could be "fire-lighters" and/or "fire-guiders" which both rhyme with firefighters, if that has any symbolic appeal. These identities more accurately describe the role of crews who are starting prescribed fires or steering wildfires. It does appear that firelighter is becoming a popular term for firefighters who are becoming disaffected by conventional suppression, prefer fire use tactics, or desire to shift into more prescribed burning. But there are many different kinds of fire lighters in society, and it cannot be assumed that people will automatically associate the name with fire management or easily recognize it as a new collective identity. On the other hand, fire-guiders may be too novel of a term, requiring too much explanation for what is already a difficult subject to explain to people who believe wildland fire use is simply "let it burn."

The term, pyrotechnicians, is another potential collective identity intended to symbolize professionalism and the use of the best science and advanced technology to manage fire. However, too many people hear the word "pyro" and think it means pyromaniac arsonists while failing to hear the word "technician." The latter term implicitly refers to well-trained, well-paid, professional

workers, so it would be excessively restrictive as a collective identity for the future fire workforce that will include a broad range of people, not all of whom will be trained or paid or professional. Besides, the word pyrotechnicians currently refers to workers who handle aerial fireworks. Perhaps the identity of pyrotechnician, if adopted in the future, will be articulated to signify the artful application of fire on the ground as well as in the sky.

8.6. Fire Crews as Workers or Managers?

In several respects, the new collective identities for the future fire workforce has been hiding in plain sight: fire workers or managers. These are the most "generic" terms that are also the most inclusive labels applicable to the broadest range of people working with fire/managing fire. The paradigm shift will hopefully end the State's "monopolization of the legitimate use of fire," and radically democratize who can wield the torch for ecological fire management. This includes agency employees, small landowners, Indigenous fire practitioners, small businesses (including worker-owned cooperatives), incarcerated people and others involved in the criminal justice system, farmers and ranchers, students (of all grades and ages), nongovernmental organizations, and groups of community volunteers. All people will be welcomed to participate in the future fire workforce--and will be needed--for the solution to the climate-wildfire crisis will require all hands working on all lands applying all options (the basic credo of the National Cohesive Wildland Fire Management Strategy) [35].

A lot of labor power from whatever source will be needed doing a wide variety of tasks: educating and training, planning, administrating, organizing, researching, surveying and monitoring, cutting and piling and burning, putting fires in and putting some out. All of these tasks and more will be needed to safely work and sustainably live with fire on the land. Both "worker" and "manager" both function as a collective identity to describe who the workforce will be and what it will do. Depending on the sweep of social change resulting from the paradigm shift, the current lines between labor and management may even blur or dissolve: all workers will be managers and all managers will be workers. Ultimately it will depend upon the future social interactions and symbolic meanings that flow from the social construction of ecological fire management.

9. Conclusion

On November 1, 2013, at the "Words on Fire: Toward a New Language of Wildland Fire" Symposium, renowned fire historian and keynote speaker, Dr. Stephen Pyne, argued that the words used by wildland fire management is out of sync with the needs of fire managers to increase the use of fire for ecological and cultural restoration goals. Indeed, current fire management terminology reflects the hegemony of the fire exclusion paradigm and will be an area of contention from advocates for a new fire resilience paradigm. The words used to symbolize the collective identifies of the future fire workforce will another terrain for ideological conflict and struggle for cultural change.

I have argued that the wildland fire community will have to become (or ally itself with) a social movement in order to actualize a paradigm shift that ends fire exclusion and replaces systematic fire suppression with a new mission of ecological fire management. The advocacy work of Grassroots Wildland Firefighters, Firefighters United for Safety, Ethics, and Ecology, and the FireGeneration Collaborative, are just a few examples of organizations who are pushing for change in the labor conditions, mission, and culture of wildland firefighting in a nascent social movement emerging from the wildland fire community. There are more groups forming each year. In the solidarity networks among these organizations and groups, discussions about the meanings of fire management and the makeup of its workforce are just beginning. Efforts like this special issue of the Fire Journal reflect that collective identity is becoming ripe for discussion, too.

Symbolic Interactionist NSM theory and its core concept of collective identity offers an excellent intellectual framework for understanding how and why a "Greenfire" social movement or something like it might develop in the future. In this paper I have perhaps stretched the parameters of science journal articles to include the methodology of "armchair speculation" and musings about the future that might more resemble "science fiction" than social science. In reimagining a future fire

management workforce that will transcend our current dominant paradigm, it will require both critical and creative thinking, examining what is and imagining what might be. Similarly, the Foresight panel of professional scientists rigorously analyzed data but then ventured beyond their data to present informed speculations--not scientific predictions--of the future of wildfire and fire management. Among their three possible if not plausible future scenarios, I chose to work with the most preferable of the three: an enlightened paradigm shift. This entirely influenced the kinds of collective identities for fire workers that I considered as possibilities. Given this acknowledged selection bias, there is plenty of reason to challenge the contents of this essay. I may be completely wrong, but I believe the Foresight panel is right: one way or another, sooner or later, the current war on wildfire will come to an end. This will have huge ramifications on the nature of fire management, let alone the status, mission, or identity of its workforce. It's time we start thinking ahead to that great change even if it stretches our science and strains our imaginations.

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