"It's all about people skills": Perspectives on the social license of the forest products industry from rural North America

Abstract: This research investigates the existing social license and the processes of achieving and articulating social license between a rural community in the northern Midwestern United States ~~community~~ and the forest products industry, based on interviews with both industry and community stakeholders. Perceptions of natural resource management and community relations are highly related to the community's history with industries, relationships with place, and perspectives on valuable work. The results suggest that social license varies spatially, and it is the place-based context that allows local industry to have a higher degree of license than non-local industry actors. Thus, social license is spatially contingent, based on particular socio-spatial and historical contexts. In this paper, we articulate how these spatial and historical contextualization shapes perceptions of acceptable operating practices. This paper offers refinement of the concept of social license while also considering how natural resource based industries can successfully meet evolving management challenges.

Keywords: corporate social responsibility, forestry, forest products industry, natural resource management, social license

Introduction

Scholars and practitioners have recently turned to the concept of social license to help explore how communities understand and give support to local natural resource industries. Social license is a term to describe the relationship or relationships between a community and a natural resource based industry. Gunningham, Kagan and Thornton (2004) define~~s~~ social license as "the demands on and expectations for a business enterprise that emerge from neighborhoods, environmental groups, community members and other elements of the surrounding civil society" (p.308). Natural resource industries recognize the value of social license for transforming how they communicate with communities , and some forecast that obtaining social license could become a requirement for obtaining a legal license from government agencies (Anguelovski, 2011; Lacey, 2012). The frameworks that may be used to incorporate social license into government licensing processes are yet to be mapped and may be counterproductive to building trust-based relationships (Lacey, 2012). Issues related to the government's measurement of the social license achieved by corporations, the penalties for non-compliance or the community's ability to halt a project if a corporation is not responsive to their concerns, are still globally problematic (Demuijnck and Fasterling, 2016; Vanclay and Hanna, 2019).

Social license is achieved within and given by communities. Communities can be defined as "a social unit of any size that shares common values, or that is situated in a given geographical area" (James, 2012 pg. 14). Communities are often viewed as people that fall in a certain geographic region. Yet even when they are grouped geographically,

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communities may include individuals with a variety of perspectives and values that shape the way they view industrial operations in their region. Further, members of geographic

communities have different relationships with industry because they may be part of the workforce, product consumers, and potential partners in projects (Demuijnck and Fasterling, 2016). Community members may also differ in the extent to which they contribute to supplying infrastructure for industry, including access to resources and the ways they benefit from industrial activity (James, 2012).

Communities are also socially, spatially, and historically contextualized; geographical spaces are socio-environmental places and communities are shaped by their shared climates and histories. Thus, the granting of social license is also based on perspectives and values developed within that community context, and understanding the social licensing process arguably requires attentiveness to the spatial and historical context of any community (Wang, 2019). This work considers how the social license to operate of a local forest products industry is embedded in a local socio-environmental context.

Unpacking Social License

Social license is generally regarded as being synonymous with community approval. But, given the dynamic nature of relationships, community approval fails to describe all of the essential elements of social license such as how different stakeholder groups perceive individual nodes of the supply chain in the forest products industry (Parsons, 2014) and especially *how* the industry can achieve and maintain social license. Social license depicts the expectations that a community has for an industry or industry's operation. From that starting point it would be most productive to view social license not as a linear relationship that directly binds industry with the community, but as a

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continuum, spectrum or even web of relationships (Dare, 2014; Edwards, 2014; Gehman et al., 2017; Parsons, 2014; Wang, 2019). Dare (2014) outlines three important facets to an industry involved in community engagement: "trust in organizations, capacity to engage stakeholders, ability of organizations to respond to changing expectations" (pg.191-192). Dare (2014) argues that these three elements form a vehicle that allows a corporation to increase its social license.

Traditionally, industries have used community engagement or public relations strategies and personnel to reach out to community members. The effectiveness of these methods would be bound to the nature of the industry operations, education provided to communities, and the relationship that can be formed during engagement. Community engagement occurs at both the strategic and operational levels (Dare, 2014). Strategic engagement includes proactively reaching out to community leaders and finding key influencers with whom to form relationships. Operational engagement exists at the work site and includes efforts to shape how people experience an operation through one-on-one conversations and by minimizing negative environmental and aesthetic impacts. However, operational engagement is often limited by poor access to the work site, particularly in rural areas with difficult terrain, large open spaces, and lacking road networks. When site access is limited, community members may rely on other sources, such as the media, to help them form their opinions of industrial operations (Dare, 2014; Lester, 2016). Previous research suggests that operational engagement has limitations relating to communities not trusting local managers, a failure to reach the full body of stakeholders, and the inability of organizations to adapt operations to fit with changing social norms (Dare, 2014). The forest products industry is characterized by both

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stationary operations (i.e. mills) and transient operations (i.e. timber harvests) that occur across a wide expanse of the landscape. In this way, forest products industries commonly cross geographic communities, thereby complicating operations level engagement. Despite the limitations, strategic engagement and operational engagement are presumed to be an important part of a corporation's achieving social license (Prno, 2012).

Effective community engagement should focus on building legitimacy, credibility and trust, three key relationship components for understanding the continuum of social license (Boutilier, 2011). Trust is particularly important for unlocking more effective community-industry relationships (Boutilier 2011; Lacey 2014; Stern 2015). The "trust ecology" includes prior behavior and performance, personal histories, positive direct interactions and equitable procedures (Stern, 2015). Building multiple forms of trust allows for greater institutional resilience, in that if one type of trust becomes jeopardized, the other forms will help retain social license (Stern, 2015).

One element of trust is reputation, which illustrates how different stakeholder groups can influence the formation of social license (Lester, 2016). The reputation of a corporation has also been defined as organizational legitimacy, and represents how stakeholders perceive the identity and values of an organization (Morrison, 2014). Furthermore, operational legitimacy is based on the action or production of services provided to stakeholders by the organization (Morrison, 2014). Lacey (2012) suggests that social license can take a long time for a corporation or industry to achieve, but social license can be lost very quickly for a variety of factors, including changes in stakeholder expectations, technology, or other disturbances. Gunningham Kagan and Thornton

(2004) argues that meeting and exceeding regulations to build reputational capital is economically vital, saying: “in

certain circumstances, [natural resource based industries] cannot afford to do otherwise" (pg.321).

The concept of social license as currently articulated certainly has weaknesses. For instance, terms often used to describe social license (e.g. legitimate, credible, support, accept, permit, approve, consent) can overlap in meaning, leading to ambiguity in their interpretation (Gehman et al., 2017; Jijelava, and Vanclay, 2017; Lacey, 2012). Likewise, social license becomes more opaque when held next to terms like corporate social responsibility, sustainable development, and corporate citizenship, which all seek to call attention to the same general concept of striving for an industry that balances economic, social and environmental goals (Elkington, 2004; Sarkar, 1998). There has even been some specific disapproval for the term social license. In one example, the term was adopted by industry and then used in conversation with the local community; stakeholders and media felt that the term was being used against them as propaganda and that it was difficult to fully comprehend (Lester, 2016). Nevertheless, many natural resource based industries have become interested in analyzing their social license in hopes of cultivating more effective partnerships with local communities (Morrison, 2014). This study examined the social license of the forest products industry based on the perspective of both industry members and community stakeholders within a rural context in the northern Midwestern United States.

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Case Study Background and Research Methods

This research centers on how the public grants social license to the forest products industry within a rural county in the northern USA, which comprises about 1,000 square

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miles of mostly forested land, nearly 50 miles of coastline, and a population of approximately 37,000 people (2010 Census). This rural community has a long history of logging and metal mining. However, due to its remote location, low population and high resource availability, this county has limited manufacturing and is primarily an exporter of forest products. Much of the timber harvested from the county is shipped to paper mills and sawmills in neighboring states and to foreign markets (MDNR 2014). For this research, the forest products industry is defined as all the lands owned and the operations that take place involving the managements of forests or the processing of wood within the county. The term forest products industry refers to public and private landowners, foresters, loggers, truckers, saw mills, primary processors, manufacturers, artisan woodworkers and specialty wood procurement taking place within the geographical boundaries of the county.

The research involved addressing three primary questions. First, how does a social license lens articulate the relationships among the industry and the local community? Second, what current level of social license is the community granting the industry? Third, in what ways can the concept of social license be further refined based on the context explored in this work?

The interview protocol was designed to elicit responses from participants about the human dimensions of the local forest products industry and to understand the processes and practices of engagement among sectors of the forest products industry and between the industry and the local community. As the interview progressed, participants were encouraged to express their personal views of their industry and their community with a strong focus on relationships, responsibilities, values and disturbances. To prevent

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the interview participants from being led to certain topics, there were no questions in the protocol directly stating the terms social license, biofuels, bioenergy, climate change, or sustainability.

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Participants were recruited using a snowball sampling methodology to help better understand the social license continuum by receiving names of key informants that could be difficult to identify from outside the industry (Heckathorn, 2011). Two separate sampling frames were used for each group of respondents, industry actors and community stakeholders. An initial assessment of the sectors of the forest products industry was performed using the Michigan Department of Natural Resources: Forest Products Industry Directory searchable database. Thirty-three corporate profiles and three industry nodes were retrieved using the directory. These profiles were utilized for developing basic classifications of the industry as well as providing an initial point of contact for the interviews. Expansion of the sectors and classification system was necessary to accurately include the operations of corporations that were referred to participate in interviews through the snowball sampling method. A database on community leaders in government, nonprofit organizations, and the local media was created to initially identify community participants, who were then contacted for interviews and, if interviewed, were asked for additional potential participants. The snowball sampling method provides a means of determining when research is approaching saturation and occurs when names were referred multiple times and very few new names were added (Charmaz, 2003). When people or companies from outside the county were referred, they were not contacted for an interview.

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There were 14 interviews conducted with individuals from industry. Industry was considered to be the collection of all corporations and sectors involved with forest products. Each participant was given a primary classification based on the operations of the corporation (referred to as businesses and companies in some interview responses) and the individual position of the participant. Six of the companies were given secondary classifications based on their organization spanning more than one class.

Six community participants were interviewed, representing positions later classified based on categories of significance identified via the snowball sampling method. Each of the participants represented a larger interest group including developers, government officials, environmental activists, conservationists and the media. These groups were referred to be interviewed because they reflect the diversity of natural resource stakeholders as well as connect persons who may shape public opinion of the forest products industry.

Thus, this research is based on a total of 20 in-depth interviews. Each participant agreed to the interview, consented to being digitally recorded, and were assured confidentiality. The interview protocol and questions were reviewed by Michigan Technological University's Institutional Review Board and were given Exempt status because they posed minimal risk to participants. The recording and interview schedule were given an identifying number to ensure accuracy during data processing. Each interview was transcribed verbatim. From the full transcription, personal information and private stories unrelated to the research were deleted from the record to help maintain the confidentiality of the participants. Interview participants have been given the opportunity to review themes and presentations that included their data before publication.

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An iterative process was applied to the coding and analysis of the interviews. Each interview transcript was coded using a grounded theory approach, where open codes were initially used to identify themes, and codes were further refined as data analysis developed (Charmaz, 2003). Key themes from literature and overarching themes from interview responses were used as initial codes, after extensive review of the conceptual frameworks that could be best applied to the data (Ryan, 2003). Although the interviews were designed around concepts of community engagement (Dare, 2014), there appeared to be very little evidence of direct community engagement. Morrison's (2014) descriptions of organizational and operational legitimacy were added to the axial coding to more accurately represent the relative weights of themes seen in the responses (Bryman, 2015). Ultimately, responses were coded as falling into one or more of the following classifications: trust in organizations, capacity to engage stakeholders, and ability to respond to changing expectations of stakeholders. For industry member responses, these classifications were then evaluated to determine how the industry engaged the community, either with its organization or its operation. The influence of organizational legitimacy was analyzed by assigning industry participant responses tallies under three divisions: relationships, ethics and responsibilities. The influence of operational legitimacy was analyzed by assigning industry participant responses tallies under three divisions: specialization, sustainability and resource management. Although responses were given a binary coding for the purpose of analysis, they are not intended to represent the overarching measure of social license, which is widely accepted as beyond binary (R. Parsons, and Kieren Moffat, 2014).

Results

Data analysis via iterative coding processes revealed several themes related to but not perfectly corresponding to existing perspectives on social license, including differentiation of issues related to relationships, ethics, and responsibilities between industry and community based on organizational dimensions. In terms of operational dimensions, dominant themes related to specialization, sustainability and resource management. The influence of organizational legitimacy divisions were informed strictly by the relative weights of themes found in industry responses. Relationships included the personal and professional interactions of individuals within the industry and any other stakeholder. An example of a quotation that would be tallied for relationships would be: "the time that we spent together- designing, figuring and their business to the shop usually take that relationship deeper." The ethics division denoted responses that could be categorized as being part of a moral code or standard beyond what is required by the profession. An example of a quotation that would be tallied for ethics would be: "as a Christian [there are] guidelines as to what is right and what's wrong." The final division under organizational legitimacy is responsibilities. Responsibilities were the obligations or duties assigned to a person by themselves or other stakeholders such as family, neighbors, and corporations. An example of a quotation that would be tallied for responsibilities would be: "I have to make sure we buy the proper material to give us the greatest yield for the least amount of money." The influence of operational legitimacy was analyzed by assigning industry participant responses tallies under three divisions:

specialization, sustainability and resource management. Specialization included changes in operational procedure or machinery to better meet market demands and improve efficiency. An example of a quotation that would be tallied for specialization would be: "equipment to manufacture [a product] has undergone a lot of changes, before it was a very hands on, labor intensive, and dangerous." The sustainability division denoted responses about operations that balanced social, economic and most often environmental goals. An example of a quotation that would be tallied for sustainability would be: "We do culvert permits whenever a stream needs to be crossed or bridge permits- that is very common now." The final division under operational legitimacy is resource management which included the inputs and outputs of manufacturing and the methods by which forests were managed in in the region often including comments about granting public access to private forest lands. An example of a quotation that would be tallied for resource management would be: "Thinning a hardwood stand is very extensive. Clear cutting aspen, not particularly intensive. It regenerates so quickly." Responses tallied in these divisions were not counted mutually exclusively, some comments bridge several divisions that were relevant for assessing social license (Table 1-4).

Coding also revealed a major theme, articulated by members of both groups, regarding the relationship between the history of natural resource based industrial activities in the area and perspectives of and expectations for current industry activities. We begin the presentation of the results with a brief history of resource extraction in the county and how participants associated this with shaping current discussions of natural resource based industry. This is followed by data on relationships, trust, and engagement

within the county. The last sections build upon the previous sections to review the current social license dynamics as described by interview participants.

Industry Histories and Community Identities

The long history of logging and copper mining in the county continues to shape the attitudes and identities of industry participants today. The economic cycles of the last decade have left only the most fit forest products industry corporations intact. The community as a whole and the individuals working for the forest products industry in particular value continued commitment to hard work in the face of structural challenges. Several industry participants talked with pride about the importance of hard work, saying things like "I have always made sure that we are cutting all the time. If you sit you are going backwards," and, "Work harder than the next guy out there, do a better job." The industry here takes a stoic stance toward surviving macroeconomic cycles: "Our long term focus has been helpful. You can make a lot of bad decisions if you are thinking short term. We have been around 100 years. You have got to keep reminding yourself of the long term goals." Several participants represented companies that have many generations of experience operating in the region, which may provide continuity on issues that impact social license.

The data suggest that the forest products industry may receive social license through the channels that were originally established by mining corporations. Several community participants mentioned that the local culture is accepting of the presence of industry, saying, "collectively, the culture still reflects that this was a mining region and that the mining companies were the giver," and, "people were used to depending on the

company store, not challenging the father mine figure and that carried over so that the people are looking to somebody to give them the job or someone to fix it."

Further, comparisons to mining operations seem to have a positive effect on perceptions of the forest products industry. One community member, comparing the impacts of logging and mining, said, "The legacy mining thing is worse." Rather than anything attributed to industry responsibility, though, participants discussed the differences between mining and logging activities in terms of the biophysical characteristics, the resiliency of local ecosystems and the natural regeneration of many tree species, which allowed the industry to remain intact. According to another community member, the forest resource was "poorly managed for 80 years and it survived or came back."

An industry member similarly focused on the positive aspects of wood products, arguing, "one of the things about our industry is that the trees that we grow are renewable. A lot of industries are extractive type industries. Ours is a renewable industry. So that is a really neat thing. And the other thing is that our industry can go very well hand in hand with other interests that folks have and we have. For instance, recreation, biodiversity, hunting, you name it." The renewable nature of forest resources and the ability to manage the forest for multiple uses were elements, community members and industry representatives alike, described as important for granting social license.

Relationships and Trust

Relationships built through formal channels of communication or industry engagement through activities such as community event sponsorships are perceived as

key for social license (Vanclay and Hanna, 2019). However, according to participants in this project, relationships exist both within the industry and informally among members of the industry and the community due to the multi-dimensional nature of human identity and social life which corresponds with understanding of variable stakeholder relationships (Demuijnck and Fasterling, 2016). It was not primarily through formal networks of communication or industry support but through informal relationships, engagement, and shared activities and interests that the forest products industry was able to achieve and maintain local license via community relationships that built and maintained trust.

One industry member talked at length about the responsibility for the environment that accompanies their position, saying, “Protecting water quality, protecting threatened and endangered species, make sure wildlife habitat is conserved, making sure the neighbors are treated correctly. Those things are common to everybody and those things are what we really got to focus on. Particularly water quality. I think as an industry in general we have come a hell of a long ways in improving what we do around water. Both in road construction and skidding wood and harvesting.” In the interviews with the industry, it was widely acknowledged that the wellbeing of their industry was directly linked to the wellbeing of the environment. There were a range of comments made by industry members related to ensuring that the forest would be sustained into the future, including: “Our responsibility is, we are obviously utilizing today, we want to make sure that future generations can utilize as well.” Another industry member said, “I am responsible for achieving that budget in terms of the amount of wood we harvest and the

amount of money we make off of that. We have to do that in an environmentally sustainable manner that means that we can keep doing it for a long time in the future."

Comments from the aggregate forest products industry regarding processes of trust were quantified and are presented in Table 1. The forest products industry relied on their organizations' or participants' ethics to build trust with the public. The organizations also relied on their relationships within the industry and community as well as their perceived responsibilities to help form trust. The forest products industry responded that operationally, sustainability had the largest impact on whether the public would trust the organization.

Table 1. Forest products industry perspective on areas where trust was built (n-14).

Organizational Themes as Related to Building Trust			**Operational Themes as Related to Building Trust**		
Relationships	Ethics	Responsibilities	Specialization	Sustainability	Resource management
46%	89%	46%	22%	59%	43%

Industry members talked about the importance of positive communication efforts while developing relationships with others, saying, "It's all about people skills, you can't go in there be a know-it-all. It's all about listening and talking. Being friendly, being open, being honest, being empathetic." Another industry participant said, "Most people are pretty understanding of what we do. They realize. Once in a while they ask when you do something that seems to be out of the norm, I usually get called on it. There are lots of people around- I know just about everybody in the community. They kind of trust you

and if they see something, they want to know why too." These comments are illustrative of how participants from industry discussed developing trust with community members.

In Table 2, the percent of comments made by the community related to building trust are shown; the developer, city official and media participants indicated a high level of trust in the forest products industry. As one of these community members said, "I think that our forest industry people are stewards of our forest, stewards of our earth of which all of us actually should be, but especially in that industry and I think that they are." While less common among the participants associated with conservation and environmental activism, all community participants made some comments about trust that indicate the existence of a social license.

Table 2. Community member perspectives on industry efforts to build trust (n-6).

Community classification	**Industry Successful in Building Trust**	**Industry Unsuccessful in Building Trust**
Community (aggregate n-6)	67%	33%
Developer (n-1)	88%	13%
City Official (n-1)	77%	23%
Media (n-1)	98%	2%
Conservationist (n-2)	37%	63%
Environ. Activist (n-1)	50%	50%

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Engagement through Community Identities

Among research participants, relationships that built trust were described as occurring not through formal activities or corporate sponsorships but through shared community identities that created a sense of shared purpose among industry actors and

community members. Of the comments made concerning community engagement, 57% focused on relationships, as the avenue through which members of the forest product industry thought that their organizations engaged stakeholders (see Table 3). Most of the relationships described by industry members were personal or involved other members of the industry. As one participant said, “I know many of the consulting foresters, timber managers. We catch up at community events and sessions.” Industry members were oftentimes also community members and could serve to inform others about the operations of the industry through their informal social networks. Outside of several specific instances, engaging stakeholders was not part of the practice of corporations within the industry operating in this community. Portions of their resource management or specialization (such as design) could have been used to develop conversations with the local community, but were largely absent. The forest products industry seemed to withdraw from many formal activities that would engage stakeholders because of perceived possibility of negative responses. As one industry member said, “We can be blamed for some of that for not protecting our turf long, long ago. Or for some of our bad behavior as an industry maybe long, long ago. We haven't tooted our horn on what’s changed, instead we try to stay out of that limelight.”

Table 3. Forest products industry perspectives on how they engage stakeholders (n-14).

Organizational Themes as Related to Engaging Stakeholders			**Operational Themes as Related to Engaging Stakeholders**		
Relationships	Ethics	Responsibilities	Specialization	Sustainability	Resource management
57%	30%	23%	24%	16%	17%

However, community participants suggested that engagement from the industry was largely positive. Overall, 66% of the comments about industry engagement suggested industry had been successful in those interactions (see Table 4).

Table 4. Community member perspectives on industry engagement (n-6).

Community Classification	**Successful Industry Engagement**	**Unsuccessful Industry Engagement**
Community (agg. n-6)	66%	34%
Developer (n-1)	80%	20%
City Official (n-1)	78%	22%
Media (n-1)	71%	29%
Conservationist (n-2)	50%	50%
Env. Activist (n-1)	50%	50%

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There were very few responses made by community members specifically about direct or formal engagement with the forest products industry. Only two references were made to direct engagement efforts initiated by the forest products industry, both having been far enough in the past where community members were unable to recall details. One community member stated, “I do remember TV commercials educating people on the industry and what it means to your economy and your environment, but I can’t recall anything particular.” Another recalled, “That program where they put the signs out and the kids can go out and learn about different types of forest cover. That was started when there was a real strong backlash against the industry.” For both industry and community participants, direct or formal engagement was described as happening rarely and

reactively. The kinds of informal engagement that were taking place, and were arguable contributing to the local license granted by the community to industry activities, were based on informal community networks. Participants had gone to school together, been coworkers, or had similar hobbies. These networks were the foundation for shared relationships, the building of trust, and the maintenance of informal engagement.

Social License in Community Context

Despite this informal embedding in the community, this forest products industry certainly does not have complete social license. In contrast to a situation of complete community identification with the industry, some industry participants described feeling either invisible or persecuted in the local community. One said they felt "demonized" and that as a member of the industry, "You are almost best to stay out of the limelight." However, this perspective does not align with the responses given by community participants and seems to limit actualizing possibilities for communication, as both groups expressed desiring.

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One potential reason for the continued dynamic of perceived conflict is that the industry is not proactively communicating about operational changes that do address the potential environmental harms of logging activities (Vanclay and Hanna, 2019). Of the community members, all six participants indicated that they had at least a mid-level understanding of the forest products industry. This is despite the lack of coordinated education by the industry and other identified possible partners from university, extension, and government agencies. Further, based upon the responses from community participants, much of the community would be receptive to direct and formal

engagement, but said things like, “I think unless you are related, you don’t really know loggers” and “I would bet that nine of ten, if people have a complaint they are not going to know where to go.”

Many participants indicated that they relied on local representatives of state agencies and a local university for information about logging practices and the forest products industry. Community members expected these institutions to maintain relations with individual industry actors and provide information to the community. However, The public’s utilization of state government and university expertise was not part of the direct line of questioning in the interviews, but this potentially provides another perspective on community industry relations. Although the Department of Natural Resources (DNR) was seen as an asset to the industry and community, there were responses that indicated that community engagement on behalf of the forest products industry was not the DNR’s primary role. Community members recognized the tensions faced by the DNR; as one interviewee said, “Our DNR is underfunded. We are ranked top three in natural resources but we are in the bottom three in state investment.” Thus, given the community’s social context of having the resources of a local university and local agents from state offices, there is less pressure on the industry to maintain direct communications to facilitate community support. However, this indirect line of communication may strain the limited resources of existing groups (i.e. universities, DNR staff, members of the industry who conduct operations in the public view) in ways that may impede the communication necessary to sustain community support for the forest products industry.

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Discussion

Past research on how natural resource based industries achieve social license focuses on formal means of engagement and communication as well as schematics of social license formation assumed to apply across an entire industry. This research instead looks at how community members and industry actors perceive the processes shaping communication, engagement, and change without explicit reference to social license and demonstrates how social perspectives of industry activities are embedded in real socio-environmental contexts and histories. Via interrogation of the processes involved in real relationships between the forest products industry and the local community and the extent to which the industry is achieving social license, this research demonstrates that social license is highly contingent on socio-historical and spatially variable community identities.

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Given the long history of natural resource based industries in this community, natural resource economic dependency is an integral part of community identity and shapes community support for forest product activities. Community members are also aware of the macro-economic forces, largely out of the hands of local industry actors, which shape operational practices. They are critical of how these larger systemic economic systems impact their community while recognizing that local industry actors are largely responsive to forces they cannot control. Forest dependent communities are often interested in balancing forest health with employment and wood production but are also often unable to pay for expanded conservation (Kangas, 1996), and community participants in this study also recognized the limits on local industry actors to make decisions about how the industry utilizes natural resources.

However, histories of natural resource extraction can also be problematic for communities as they face economic dependencies that shape their willingness to accept industry activities. Gunningham, Eagan and Thornton (2004) found that industry actors felt location and visibility had a very strong connection to social license, even claiming that, “an economically dependent local community would be likely to have a more relaxed social license” (324). In communities with a diverse economy, the processes of achieving social license are often much more complex (Gunningham, Eagan and Thornton, 2004). Communities may exert low pressure on the industry due to economic dependence; however, the industry arguably requires more than just local consent in order to operate (Lacey, 2012). Considering the relationship between this community and the natural resource industries in the community, local community members and local industry operators have shared history and experience as having limited power to control the larger economic forces acting upon them. This shared experience shapes the process of acquiring social license.

A corporate strategy employed to maximize shareholder profit has been to vertically integrate or divest of certain sectors. Vertical integration is when a corporation is invested or owns more than one segment of the supply chain. Vertical integration can help to increase profit margins, secure access to a resource, and add resilience to the expansion and contraction of the industry based on economic cycles. Yet vertical integration can also remove autonomy, flexibility, or opportunities for advancement in local communities. The way that industry arranges and presents its sectors to the local

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community could influence social license. Thus, issues of scale matter for shaping the process of acquiring social license.

This research also suggests that informal relationships through shared social networks and shared community identities (as hunters, fishers, or snowmobilers) build trust for the local forest products industry. Trust in industry was not based in knowing the specifics of operational practice; rather, trust was developed and maintained through informal relationships. If formal and informal relationships predicating trust are absent social license may not develop, leading to the collapse of otherwise viable projects (Jjelava and Vanclay, 2017). For environmentally oriented actors, this means seeing industry actors as people who also use the environment. For industry actors, this means acknowledging their interest in an environment that can sustain both economic activities and the recreational activities they want as humans who also live in the community. Yet this research suggests that these informal networks are not serving as a means to communicate about improvements to industry operations that promote environmental sustainability through best management practices (BMPs) and sustainability certification programs. Although adherence to regulations or voluntary participation in sustainability certifications is standard to the forest products industry, it is unclear if the details of the industry performance are being communicated with the public effectively. This represents an opportunity for the industry to improve development of community relationships through communication about operational practices focused on sustainability efforts, especially if ways are found to do this that leverage the informal communication and relational networks that seem to matter most to community members.

Many of the resources affected by forest management are held in the public trust (Fujisawa, 2004), so it is important for both industry actors and community stakeholders to feel engaged and involved in decisions regarding local natural resource management.

As Krogman (2002) described, the possible range of co-management of community forests and industries is a broad spectrum. Yet Moon's (2011) findings on voluntary environmental behavior by corporations suggest that corporations are less concerned with regulatory disciplinary measures than with maintaining economic stability. The current research project suggests that local community members recognize the pressures facing industry actors as well as the interest both industry and local groups share in managing natural resource use for the long term, suggesting ways that natural resource based industries can leverage the extent to which informal relationships, shared commitments to value-based ethics, and shared localized sense of responsibilities shape their organizational tendencies and the extent to which specialization, sustainability and resource management impact operational possibilities, themes shared by both groups in ways that suggest more commonality than division among participant perspectives.

Conclusion

The public's perception of industry operations has been shaped by the history of natural resource use in the region, leaving many parts of this local community conditioned to provide social license. At present, the forest products industry in this county renews its social license through personal relationships and shared values between industry members and community members, despite the absence of direct community engagement efforts. Industry operations have improved with global innovations in technology, best management practices, sustainability certifications and health and safety regulations, and the industry might strengthen its social license by engaging community members in conversation about the shared values associated with the management of

Commented [IL23]: This is a very strong statement given the limited data base.
You have much more data on the industry experience from a population that is statistically robust.

Commented [IL24]: So – how does this fit with the statement in your Abstract that, 'results suggest that social license varies spatially, and it is the place-based context that allows local industry to have a higher degree of license than non-local industry actors.'
Where has this disappeared to and why? See written comment G.

natural resources. A strengthened social license would benefit the industry if it tries to grow or navigate disturbances.

In this research, the concept of social license helps to explain the ways that operational and organizational dimensions of a natural resource based industry achieve social support from local community members. Further, this research suggests that community members and industry participants have more commonalities than divisions in terms of key elements shaping social license, including commitments to a shared sense of value ethics and responsible resource management. Finally, this research suggests ways of expanding the concept of social license to consider the impact of local socio-environmental context, informal social relationships, and localized values as well as suggesting that natural resource based industries can leverage direct or mediated dialogue with local communities to communicate changes to operations and organization related to both large scale economic forces and localized environmental management.

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Reviewer Comments

This is an excellent draft of a paper that has the potential to make a significant contribution to the literature on social license. More particularly, the finding that local companies have a higher degree of social license than non-local actors and why, is both important intellectually and useful as a practical aspect of the social license phenomenon.

However, the paper requires some serious restructuring in order to improve the balance between data and discussion and establish a visible connection between the statements in the abstract and both findings and conclusions in the body of the text. Furthermore, based on the character of the data base underpinning the paper, it would be more confidently presented as the experience of industry in gaining/maintaining social license qualified/endorsed/supported by the perspectives of informed stakeholders.

General observations are that:

- There are a number of declaratory statements that need to be qualified/validated by reference to published work;

- There are references that are incorrectly cited in the text (Gunninham, et al, for example) and references that are cited in the test but omitted from the list of references.
- The way statistical summary tables are used to portray social findings is highly questionable.

More detailed comments and questions, as listed in the annotated version of the paper are as follows:

Comment A:
Are you sure want this quotation??? In the original paper (Gunningham, Kagan and Thornton) the authors introduce this definition as a 'straw man' – "for present purposes" (page 308, line 25 – in frame the arguments subsequently developed in the text.
In terms of the overall thrust of your paper, the introduction might be better served by using wording from Gunningham Eagan and Thornton that precedes the 'straw man' definition and could read: to, operate in accordance with their social license corporations 'are constrained to meet the expectations of society and avoid activities that societies (or influential elements within them) deem unacceptable'

Comment B:

In unpacking social license, you really should go beyond the statement 'generally regarded' by reference to some of the historical publications on social license going back to 1996-99, upon which this 'general regard' is based, most fully and widely developed in the mining industry. Of potential value is pointing out that the term, social license, has deep roots in the forestry industry going back to the 1996 article by Henson Moore (Moore, W.H. 1996 The social license to operate. In *PIMA Magazine. Paper Industry Management Association*, pp. 22–23) on social acceptance of the pulp and paper industry. There is also the more recent work by Kiran Moffatt and others on the relevance of social license to the forestry industry in Australia.

Comment C:
The gradual reveal that the study area is a county in Michigan, and yet apparent reluctance to disclose that it is Houghton County, which can be readily deduced from the information you provide in the paper is strange. Is there a reason for not stating plainly that the study area is Houghton County?

Comment D:
You selected 33 corporate profiles and industry nodes from a published data base and then obtained in-depth interview with representatives from 14 of them. That is a sample of nearly 50% of the identified population – an excellent representation. Indeed, data available on the internet (Michigan Forest Pathways assembled by Michigan State University) indicate that there are some

80 larger and smaller industries listed in the Houghton County Forest Industry. If your study is indeed Houghton County, the 14 interview sample is 17.5% of the total industry – potentially a significant representation.

Comment E:
This is where I have real difficulty with the reliability of your study. You have interviewed six community participants. Now, six from a county population of 37,000 people is not going to be statistically significant, yet you go on to draw extensive conclusions as to the community perspective. I am not sure about this – you are in a genuinely strong position to talk about company experiences in gaining and maintaining social license with supporting observations from informed stakeholders; no more, in my opinion.

Comment F:
Tables 2 and 4 are a disaster. It is highly questionable to present statistical breakdowns within single samples. Presenting these table is unhelpful and an abuse of statistical processes. You could consider consolidating the 'community' responses into a single table – as you have done with the industry interviews. However, in my opinion, it is preferable not to present the data in tabular format - you have some fine quotations from informed stakeholders to balance the opinions expressed by the industry contacts. Stick with the narrative approach.

Comment G

At this point in your discussion, you state that the ‘shared experience of local industry operators and communities shapes the social license. Here you approach, somewhat obliquely, the issue that is front and center as a major conclusion in the abstract: that local industry to have a higher degree of license than non-local industry actors. This should have been expanded and emphasized.

Also missing here, is any comparative assessment. More particularly compare with the work of Baines and Edwards (Baines, J. and Edwards, P., 2018, The role or relationships in achieving and maintaining social licence in the New Zealand aquaculture sector. Aquaculture, v485, p140-145) who reached similar conclusions based on similar reasons in a different sector.

This is potentially of real significance to understanding the social license/social acceptance phenomenon and would raise the paper to one of a serious contribution.