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COLLECTIVE SENSEMAKING DURING THE EARLY PHASES OF SUSTAINABILITY WORKING GROUP IDENTITY CREATION

Walking the sustainability talk

Maria-Elisa Männistö

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University of Turku

Faculty of Technology
Department of Mechanical and Materials Engineering
Industrial Engineering and Management
Doctoral Programme in Technology

Supervised by

Associate Professor Oskar Karlström
University of Turku
Turku, Finland

Professor Satu Teerikangas
University of Turku
Turku, Finland

Professor Saku Mäkinen
University of Turku
Turku, Finland

Reviewed by

Professor Silvia Gherardi
University of Trento
Trento, Italy

Professor Harri Haapasalo
University of Oulu
Oulu, Finland

Opponent

Professor Saku Mantere
McGill University
Montreal, Canada

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ABSTRACT

The existing literature on sensemaking has largely overlooked the importance of resource scarcity as a fundamental factor in strategy implementation and sustainability challenges. Sustainability strategy is typically implemented in organisations through sustainability working groups that develop action plans under resource scarcity. Resource scarcity often leads to conflicting interests among part-taking stakeholders, resulting in organizational tensions and negative emotions at the group level that threaten the development of group identity. Furthermore, despite its central role in successful strategy implementation and sensemaking, the literature on organizational identity has neglected the early stages of working group identity creation research. Groups acts as a practical tool for strategy implementation being part of the organizational management system. Therefore, this research combines sensemaking theory, based on Sandberg and Tsoukas' (2020) types, with self-categorisation theory (SCT), as originally proposed by Turner et al. (1987), to provide a more nuanced theoretical model of group identity creation. These different types of sensemaking have opened new research avenues by bridging the cognitivist and constructivist research streams, leading to a more nuanced understanding of the temporary and processual nature of sensemaking.

This research responds to the call from behavioural strategy scholars for more empirical research on strategy implementation by taking a socio-material approach to sensemaking and group identity creation. It follows the critical realism research philosophy in which material reality forms the objective nature of the world and social systems produce a framework for the way actors subjectively perceive the world. The socio-materiality perspective in sensemaking research recognizes the importance of the emotional needs of individual actors as a driving force behind social communication and the use and allocation of resources. Power processes and group dynamics are important elements within socio-materiality, and rituals, rules, resource allocation and use are intertwined with group structures and ongoing structuring processes, such as emerging group norms. The sociomaterial approach at the intersection of sensemaking and group identity creation is still a relatively unexplored area, which justifies the intertwined use of deductive and inductive approaches in this research.

The focus of the study is on exploring how the sustainability working group navigates and establishes itself amidst strategic objectives, expectations of primary stakeholders (including paradoxical expectations related to sustainability issues), emotional reactions and allocation of scarce resources during its early creation phase. The sociomaterial approach allows for the examination of social dynamics and organising within their material context under the framework of "practical rationality". Taking a critical realism stance in sociomateriality allows us to analyse social and material structure and structuring (e.g. group identity process) as a separate constituent from actors' actions (i.e. socially constructed through subjective experienced agency), while recognising that embodied actions or inactivity bring structure alive.

According to the findings in this study, the formation of a sustainability working group's identity is an iterative process that intertwines conscious cognitive mental models with unconscious cognitive and emotional processes of actors within the socio-material environment. Building on previous literature and informed by empirical observations, this research finalizes a theoretical model of early-stage group identity formation through abductive research logic. In addition, this study has identified the gradual emergence of various sensemaking types and the transitional periods in the creation of group identity from the individual to the group levels. Furthermore, a detailed codebook including guidelines has been created, which will provide directions for future research on collective sensemaking and group relationships in the field of behavioural strategy. This study provides insights into the dynamic interplay of group identity creation and internal processes within sustainability working groups. While recognizing the importance of exploring the effective management of paradoxical tensions in implementing sustainability strategies, the primary focus remains on examining the complex dynamics of group identity creation. This focal point aims to establish the groundwork for forthcoming research pathways and the development of practical instruments for managing sustainability. The ultimate goal is to increase the efficiency of implementing sustainability initiatives through the collaborative efforts of a sustainability working group.

KEYWORDS: collective sensemaking, group identity, sustainability management, sustainability working group, group identity creation

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TIIVISTELMÄ

Vastuullisuusjohtamisen haasteet organisaatioissa kietoutuvat kiihtyvän luontokadon myötä resurssiniukkuuden ympärille. Länsimaisessa talousjärjestelmässä ja työelämässä vallinnut jatkuvan kasvun logiikka on yksiselitteisesti kestämätön. Organisaatiot etsivät nyt kiihtyvällä vauhdilla uusia toiminta- ja tuotantomalleja luodakseen kestävää arvoa yhteiskunnassa siirtyessään kohti vastuullista rajallisuuden logiikkaa. Tässä tutkimuksessa tarkastellaan vastuullisuustyöryhmän ensihetkiä ja esitetään prosessimalli ryhmäidentiteetin muodostumisesta. Työryhmät sosiaalisena systeeminä toimivat yksilön ja organisaation johtamisen työvälineenä liittymällä osaksi organisaation johtamisjärjestelmää sekä vastuullisuusstrategian toimeenpanoa. Vastuullisuustyöryhmät kohtaavat arjessaan yhteiskuntamme jo lähes unohtaman elollisissa systeemeissä vallitsevan resurssiniukkuuden ja sen synnyttämät luonnolliset jännitteet.

Ryhmätutkimuksessa ryhmän jäsenien kohtaamat resurssiniukkuuden jännitteet eivät koske vain ryhmän sisäistä resurssiallokaatiota vaan ulottuvat myös ryhmän sidosryhmien suhteissa tapahtuvaan resurssiallokaatiopohdintaan haastaen ryhmäidentiteetin kehittymistä. Ryhmään liittyminen ja kuuluminen ovat ihmisen perustarpeita, ja ryhmän resurssineuvottelu liittyy siellä olevien ihmisten tarpeiden tyydyttämiseen tietyn perustehtävän ja ryhmän tavoitteiden äärellä. Työryhmän jäsenet tunnustelevat ja neuvottelevat heti ensimetreistä lähtien esimerkiksi sosiaalisen oikeudenmukaisuuden normeista ja arvostuksen tai turvallisuuden tunteiden saavuttamisesta. Valtaa tunnustellaan ja konstruoidaan työryhmän sisällä ja myös suhteissa sen ulkoisiin sidosryhmiin. Vastuullisuustyöryhmä kohtaa organisaatiosysteemin valtarakenteiden ja normien muutostyön haasteet, jotka jäävät usein vastuullisuusstrategiaa ylätasolla laadittaessa piileviksi. Puheesta tekoihin on organisaatiotodellisuudessa pitkä matka ja ilman valtaa työryhmän toimijuus jää näennäiseksi.

Työryhmän on kyettävä tekemään tolkkua kompleksisestä toimintaympäristöstä tunnistaakseen oman perustehtävänsä, tavoitteet sekä sosiaalisen suhdeverkoston potentiaalisine resursseineen ja sen ryhmään kohdistuvat odotukset. Oman perustehtävän tunnistaminen käynnistää ryhmäidentiteetin luomisen prosessin, jonka aikana ryhmän jäsenet aistivat, luovat ymmärrystä, neuvottelevat ja sisäistävät ryhmän normatiiviset säännöt sen päätöksentekoon liittyen. Vastuullisuustyöryhmän

ensihetket ovat kriittisiä, sillä ne synnyttävät sen eettisen ja normatiivisen perustan, jonka varassa useiden organisaatioiden vastuullisuusstrategiatyön käytäntöön toimeenpano pitkälti lepää.

Käyttäytymisstrategian tutkijat ovat peräänkuuluttaneet lisää empiiristä tutkimusta siitä, miten strategia muuttuu puheista ja suunnitelmista todellisiksi teoksi. Tämä tutkimus vastaa kutsuun tuottamalla mallin vastuullisuustyöryhmän tolkuntekemisen ja ryhmäidentiteetin luomisen prosessista. Tutkimuksessa hyödynnetään erityisesti Sandbergin ja Tsoukasin (2020) tolkuntekemisen eri tyyppejä yhdistäen niistä saatuja oivalluksia itsekategorisointiteoriaan (self-categorization theory, SCT) ja erityisesti Turnerin (1987) alkuperäiseen teoriaan nojautuen. Tolkuntekemisen tyyppien avulla on tässä tutkimuksessa rakennettu silta kognitivistisen ja konstruktivistisen tolkuntekemisen- ja ryhmäidentiteetti-tutkimusalueiden välille mahdollistaen työryhmän tolkuntekemisen ajallisen ja prosessuaalisen luonteen yksityiskohtaisemman ymmärryksen rakentumisen.

Tutkimuksessa käytetyn sosiomateriaalisen lähestymistavan avulla voidaan tarkastella sosiaalista dynamiikkaa ja työryhmän organisoitumista materiaalisessa kontekstissaan "käytännöllisen rationaalisuuden" puitteissa. Kriittisen realismin omaksuminen sosiomateriaalisuudessa antaa meille mahdollisuuden analysoida sosiaalista ja materiaalista rakennetta ja jäsentymistä (esim. ryhmäidentiteetti-prosessia) toimijoiden toimista erillisenä osatekijänä (eli sosiaalisesti rakentuneena subjektiivisen kokemuksen kautta) ja tunnustaa samalla, että ruumiillistuneet toimet tai toimimattomuus tuovat rakenteen eloon.

Aiempaan kirjallisuuteen perustuen ja empiiristen havaintojen perusteella tässä tutkimuksessa viimeistellään teoreettinen malli työryhmän identiteetin muodostumisesta alkuvaiheessa abduktiivisen tutkimuslogiikan avulla. Tämän tutkimuksen tulosten mukaan vastuullisuustyöryhmän identiteetin muodostuminen on iteratiivinen prosessi, jossa tietoiset kognitiiviset mielenmallit kietoutuvat yhteen sosiomateriaalisen ympäristön toimijoiden tiedostamattomien kognitiivisten ja emotionaalisten prosessien kanssa. Lisäksi tässä tutkimuksessa on tunnistettu erilaisten tolkuntekemisen tyyppien asteittainen esiin tuleminen ja siirtymävaiheet työryhmän ryhmäidentiteetin luomisen aikana yksilötasolta ryhmätasolle. Lisäksi tässä tutkimuksessa on luotu yksityiskohtainen koodikirja, joka sisältää ohjeita antaen suuntaa kollektiivista tolkuntekemistä ja ryhmäsuhteita koskevalle tulevalle tutkimukselle käyttäytymisstrategian alalla. Työryhmien johtamiselle ja ohjaamiselle löytyy myös yksityiskohtainen työryhmän käynnistämisen rakennekuvaus niiden työskentelyn käynnistämisen työvälineeksi. On aika siirtyä vastuullisuuspuheesta tekoihin.

ASIASANAT: kollektiivinen tolkuntekeminen, ryhmäidentiteetti, vastuullisuusjohtaminen, vastuullisuus, ryhmädynamiikka, ryhmäidentiteetin. luominen,

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1 Introduction

The intra-organizational tensions arising from resource scarcity present ongoing challenges for sustainability management implementation. The prolonged and asymmetric dominance of the economic perspective in organizational decision-making has firmly established institutional power structures and strategic decision-making processes geared towards short-term value maximization (Aguinis & Glavas, 2013, 2019; Sandberg & Tsoukas, 2011; Schein, E. H., 2010; Schildt H, Mantere S, Cornelissen J., 2020). Frequently, organisations' sustainable actions are criticized as mere management rhetoric or superficial compensatory donations, lacking the deep cultural identity impact necessary to support the creation of shared sustainable value for stakeholders (Aguinis & Glavas, 2013, 2019; Battisti et al., 2022; Kramer, M. R., & Porter, M., 2011). This requires an organisation to reach a systemic state in which the dominance of economic viewpoint has settled, and environmental and social pillars of sustainability have risen equally with economic issues in strategic decision making (Aguinis & Glavas, 2013). In addition, the environmental, social and governance (ESG) metrics within a management system are socially constructed and specific to an organization, therefore lacking general comparability (Eccles & Stroehle, 2018). Their socially constructed nature requires ongoing collective sensemaking and interpretation regarding the objectives of sustainability strategy, the available resources and supportive sensemaking structures that aid sustainability strategy implementation in daily life (Aguinis & Glavas, 2013, 2019; Ashforth, B. E., & Mael, F. A., 1996; Weick, K. E., 1995).

The existing sensemaking literature has overlooked the significance of resource scarcity, which lies at the core of sustainability problems (Aguinis & Glavas, 2019; Basu & Palazzo, n.d.; Cristofaro, 2021; Fleming & Spicer, 2014; Sandberg & Tsoukas, 2015; Vaara & Whittle, 2022). Resource scarcity often leads to conflicts of interest among part-taking stakeholders, resulting in organizational tensions and negative emotions at the group level. In addition, the organizational identity literature has neglected the early stages of working group identity creation research, despite their crucial role in successful sustainability strategy implementation. In addition, past organizational research has relied heavily on representational sensemaking and post-hoc interviews or surveys conducted with top management,

who are inherently disconnected from the world of organizational practice (Boje, 1995; Brown et al., 2015; Sandberg & Tsoukas, 2015, 2020). To capture how practice is practiced (following Gherardi & Laasch, 2022) during sustainability working group identity creation, this research integrates the sensemaking theory following Sandberg and Tsoukas's (2020) types and the self-categorization theory (SCT) according to the original proposal of Turner et al. (1987) to present a more nuanced theoretical model of group identity creation.

A frequently used and academically researched management tool for identifying key strategic sustainability objectives and transforming them into sustainability initiatives is the creation of a sustainability working group. Therefore, the process of creating the identity of the sustainability working group is the focus of this research. Group identity is the mirror through which members of the group evaluate the "sense of return on investments of self in role performances" (Kahn, 1990) to further develop their professional identities and role behaviours in organization. If group identity and organizational power structures do not support sustainable role performance of the group members, it becomes impossible to implement impactful sustainable actions (Eisenberger et al., 2001; Rhoades et al., 2001). Groups act as a practical tool for strategy implementation as part of the organizational management system (Abrams & Hogg, 2017; Kahn et al., 2018). To ensure productive group work, the more nuanced mechanism of the early stage of group formation is important to recognize (Abrams & Hogg, 2017).

This research sheds light on the early stages of sustainability working group identity creation process, which is a complex activity where actors sense and act on emergent issues in organizing within the working group in relation to its part-taking stakeholders (du Gay, 2020; Weick, 1995). To understand the practical nature of sustainability strategy management and to support its implementation it is important to examine how visible and hidden socio-material structures and structuring emerge in relation to intragroup and outgroup stakeholders during group identity creation (Gioia et al., 2010; Healey et al., 2015; Hodgkinson & Healey, 2011; Turner, 2005). Stakeholders can be individual professionals representing issues, other groups related to the group or even organizations with specific expectations of the group (Scott & Lane, 2000). Importantly, all social actions occur in the material world, ultimately creating a need to organize issues and making the outcome of the sustainability working group's organizing highly visible in a certain ecosystem (Beyes et al., 2022; Boxenbaum et al., 2018; du Gay, 2020; Gherardi, 2023; Gherardi & Laasch, 2022; Stigliani & Ravasi, 2012).

This research focuses on the process of early stage group identity creation within a sustainability working group amidst resource scarcity during strategic sustainability initiatives implementation. However, group identity creation is closely tied to organizational power structures as the group's ability to act is intimately

connected to these structures through organizational resource allocation in situ (Fleming & Spicer, 2014; Turner, 2005). A socio-material approach, utilized in this research, allows for examining the power dynamics involved in group identity creation, as both social and material resources play crucial roles (Leonardi, 2013; Orlikowski, 2000, 2007; Stigliani & Ravasi, 2012). By considering the utilization of social and material resources and the constraints imposed by their availability, we can understand the limitations and opportunities for the group to act and further the development of its normative discussion (Tajfel & Turner, 1979; Turner, 2005; Willer et al., 1989). Additionally, resource allocation can generate organizational tensions due to conflicting interests among stakeholders, affecting group identity creation (Freeman, 1994; Gioia et al., 2010; Kouamé et al., 2022).

This dissertation is structured as follows. First, it presents the empirical research questions related to the topic. The next two sections review existing papers concerning sensemaking, focusing on sensemaking types, and organizational group identity literature including SCT. Then the research design and methodology are outlined, followed by the data analysis. A discussion follows of the empirical findings in relation to the theoretical findings. Finally, the dissertation reviews the limitations of the research and concludes with future research avenues.

1.1 Research objectives and scope

The establishment of a sustainability working group identity necessitates contextual awareness of the organizational sensemaking configuration, available resources and temporary technical and social sensemaking structures in management (Gherardi & Laasch, 2022; Ravasi et al., 2020; Tan et al., 2020). The identity creation of a sustainability working group is an iterative process whereby the conscious cognitive mental models and unconscious cognitive and emotional processes of the actors are intertwined in the socio-material environment (Abrams & Hogg, 2017; Ellemers et al., 1999; Healey et al., 2015; Hodgkinson & Healey, 2011; Leonardi, 2013; Orlikowski, 2007). This process leads to the development of central collective mental models relating to the working group's existential questions and norms (Pratt, 2003; Spears, 2021; Turner, 2005). The sensemaking configuration represents the collective understanding of stakeholders, reflecting their temporary expectations and identity beliefs regarding the emerging group and its identity (Kouamé et al., 2022; Sandberg & Tsoukas, 2020). These expectations generate organizational tensions due to conflicts of interest, requiring actors to engage in integration work while navigating the appropriate interactional rhythm in response to the temporary identity construction needs in developing the working group (Oliver & Vough, 2020; Weick, 1995). During the working group formation, the actors attempt to revisit relationship-based identity claims between different stakeholders and craft their forming group

identity against these (Ravasi et al., 2020). However, we do not know how emotional and unconscious cognitive processes are organized in relation to conscious cognitive processes during the working group identity creation (Healey et al., 2015; Hodgkinson & Healey, 2011). In other words, we do not know how the working group identity creation process unfolds during its early stages (Abrams & Hogg, 2017; Gioia et al., 2010; Healey et al., 2015).

Sustainability working group creation is a temporal, conscious and partly unconscious process through which sustainability actors experience and perceive information from the environment to steer others towards the organization's strategic sustainability objectives (Gioia & Chittipeddi, 1991; Healey et al., 2015; Tan et al., 2020). This information from the environment may consist of emotions, bodily sensations or cognitive perceptions (Beyes et al., 2022; Gherardi, 2023). According to Weick (1995), sense and action should be synchronized; that is, actors' sensemaking and sensegiving patterns related to strategic sustainability objectives, resources and identity voids should fit together at the collective level (Kouamé et al., 2022; Maitlis, 2005). The fitness of this dialogical process is determined by the levels of the sensegivers' contextual sense and timing (Heaphy, 2017; Maitlis & Christianson, 2014; Schildt, Mantere, Cornelissen, 2020). The rhythm of actors' acts should be aligned with the identity voids of the sustainability working group's identity construction needs. However, the working group's identity creation is intertwined with processual power that cognitively and emotionally frames the sustainability working group formation (Gioia & Chittipeddi, 1991; Giorgi, 2017; Turner, 2005). Processual power is produced through actors' interaction and may later manifest as a form of more permanent systemic power (Schildt, Mantere, & Cornelissen, 2020; Turner, 2005). Therefore, we might assume that there is a certain "time, place and order" in the working group's successful identity creation process (du Gay, 2020; Weick, 1995).

In addition, sustainability is a fuzzy concept and is still mainly based on organizations' obligatory definitions and is thus highly coloured by its inner politics (Eccles & Stroehle, 2018). Private sector companies are struggling between market pressure and public audiences' requirements, which are forcing, parallel with regulative improvement, incremental sustainability changes. However, resource scarcity and economic pressure challenge private sector organizations' idealistic sustainability objectives, and that is reflecting in sustainability implementation work (Aguinis & Glavas, 2019; Kramer & Porter, 2011; Kramer & Pfitzer, 2016). Thus, the salient "duality of idealism-pragmatism" (Ashforth & Reingen, 2014, p. 485) in which the abstract sustainability talk differs from the organizational reality, is often part of the organizational identity. In this research, the definition of sustainability is constructed through the participants' sensemaking, interpretations and sensegiving in situ, in relation to the organizational sustainability objectives and stakeholders'

expectations. Thus, it is based more on organizational realities than abstract or idealistic cognitive constructions.

This study utilizes the socio-material approach, which allows observing how issues are gradually organised and constructed through the activities of actors from the abstract to the material level and back (Orlikowski, 2007; Stigliani & Ravasi, 2012). The research follows the critical realist philosophy of research in which material reality represents the objective nature of the world and social systems create a framework for the way actors subjectively perceive the world (Ackroyd & Fleetwood, 2005; Leonardi, 2013). Humans' linguistic abilities are limited, and a sense of plausibility precedes accuracy in collective prospective sensemaking (Gustafsson, R., 2023). Materiality in sensemaking might be seen as an interpretative framework which offers individuals "a real physical sense" (Cornelissen et al., 2014) which anchors thoughts and emotions in the present moment. This "cognitive materialization" gives an individual better access to the others' mental models and beliefs during the green transition to construct an agreeable common vision for future sustainable co-working models (Stigliani & Ravasi, 2012). Yet it leaves space for the embedded emotional world of rituals, habitual acting and being, which reach through the sensory system (Beyes et al., 2022). The socio-material approach focuses on the practical world's contextual issues and how they further shape individuals' and groups' cognitive framing, interpretations and schemas, emotions and behavioural acting in socio-material spaces (Cristofaro, 2021; Sandberg & Tsoukas, 2015, 2020).

Sandberg and Tsoukas (2020) argued that sensemaking research has been divided into two mainstream approaches: the cognitivist and constructivist approaches. From the cognitivist perspective, sensemaking is an actor's attempt to interpret changed situational cues using existing mental schemes and models. However, when these schemes fail to fit the interpretation of the changed situation, sensemaking is activated to reorganize the actor's mental models and reconstruct actions (Cristofaro, 2021). Cognitivists are interested in understanding how schemas and mental models are reconstructed in response to sensemaking triggers (Maitlis & Christianson, 2014). According to Weick et al. (2005), sensemaking focuses on the interplay between action and interpretation, which involves the materialisation of cognitive abstractions through behavioural acts and practices within a specific socio-material environment, including interpretation and social construction in a particular context (Cornelissen et al., 2014; Kaplan, 2011; Sandberg & Tsoukas, 2020; Stigliani & Ravasi, 2012; Weick et al., 2005). Constructivist approaches embrace the contextual nature of sensemaking and understand that actors make sense of the social situation as an ongoing activity by using their senses in a particular socio-material environment. Thus, actors' sensemaking and meaning making is based on their subjective experiences in situ.

The socio-materiality perspective in sensemaking research recognizes the significance of individual actors' emotional needs as a driving force behind social

communication and resource utilization and allocation (Beyes et al., 2022; Boxenbaum et al., 2018; Leonardi, 2013; Weick et al., 2005). Power processes and group dynamics are important elements within socio-materiality, and rituals, rules, resource utilization and resource allocation are intertwined with organizational structures and ongoing structuring processes, like organizational norms. Technology, as part of the organizational structure, influences the agency and direction of actors (Orlikowski, 1992, 2000). Sociomateriality, within posthumanist practice theory, equals human and non-human taking seriously the entanglement of the social and the material, while proposing to move away from human-centred research, encouraging the replacement of a notion of agency with agencement, emphasizing the continuous state of becoming of issues (Gherardi 2017). According to Gherardi 2017 "...the materialities of bodies, technologies, discourses could not be separated from the society that formed them, and vice versa the social cannot be considered external or separate from materialities." (p.38). In addition, according to Turner (2005), a three-process theory of power, authority and persuasive power emerges from actors' interactions and influence within a group. Authority power is based on an actor's role in the organization, while persuasive power is derived from social skills and knowledge demonstrated in the situational context, thereby serving as a source for future organizing activities (Schildt, Mantere, & Cornelissen, 2020; Turner, 2005). Furthermore, authority power can be manifested through appealing to different stakeholders, leveraging one's access and ability to influence them. It may also become evident when someone refers to their organizational role as a justification for their thoughts or claims.

Interestingly, an actor's agency is intricately linked to the socio-material environment, which constructs the sensemaking configuration for actors in their ongoing identity construction within a specific context (Orlikowski, 2000; Sandberg & Tsoukas, 2011, 2020). The socio-material approach to sensemaking bridges the gap between cognitivist and constructivist perspectives by emphasizing the action-oriented nature and contextual embeddedness of sensemaking as it is an intertwined part of cognitive modelling (Sandberg & Tsoukas, 2015; Stigliani & Ravasi, 2012). It also equals the human and non-human actorhood However, research on this approach unfortunately remains scarce (Enang et al., 2023; Kaplan, 2011; Sandberg & Tsoukas, 2015; Stigliani & Ravasi, 2012; Tan et al., 2020; Weick et al., 2005).

The constructivist approach focuses on ongoing discourses and the socially constructed shared understanding that emerges in response to triggered stimuli (Sandberg & Tsoukas, 2020). However, previous sensemaking research has primarily focused on major sensemaking episodes characterized by time pressure (Sandberg & Tsoukas, 2015, 2020). Therefore, the more nuanced underlying mechanisms of ongoing contextual sensemaking, which enable actors to act despite temporary cognitive schema breakdowns, have been overlooked. Fortunately, recent scholarly discussions have explored different types of sensemaking that occur in

situations where time pressure is not as prominent and where actors are more closely connected to ongoing, habitual activities (Enang et al., 2023; Heaphy, 2017; Locke & Golden-Biddle, 1997; Sandberg & Tsoukas, 2015, 2020; Stigliani & Ravasi, 2012). Interestingly, Sandberg and Tsoukas (2020) introduced four sensemaking types: immanent, involved-deliberate, detached-deliberate and representational sensemaking. These types have provided new opportunities to explore the more nuanced mechanisms of sensemaking related to both major and minor organizational changes. They have opened new research avenues by bridging the cognitivist and constructivist research streams, leading to a more nuanced understanding of the temporary and processual nature of sensemaking.

In conclusion, both the cognitivist and constructivist approaches are arguably necessary to understand the process of group identity creation (Weick et al., 2005). The establishment of a group identity in a working group involves the reconstruction of actors' previous schemas and mental models in relation to organizational and personal issues in the present moment, while also considering future possibilities for action (Albert, 1998; Ashforth & Mael, 1989; Gioia, 1998; Heaphy, 2017; Huy, 2011; Rerup et al., 2022). By integrating these two approaches, using different types of sensemaking, drawing on SCT and taking a sociomaterial approach, this study adopts a holistic existential ontology to explore collective sensemaking in the context of implementing a sustainability initiative, as suggested by Sandberg and Tsoukas (2020).

The focus of this research is on uncovering how the sustainability working group copes and creates itself during the group identity formation process amidst the organizational resource scarcity, when the stakeholders' sustainability objectives are present. Often, sustainable actions have been accused of being mere managerial rhetoric or compensative donations without the core cultural identity impacts to support shared value creation (Eccles & Stroehle, 2018; Kramer & Porter, 2011; Kramer & Pfitzer, 2016). Ashfort and Mael (1996) observed a continuous negotiation between managerial identity claims and the organization's reality, where the managers utilize different socio-material tools, like symbols or social structures (p. 31). Thus, using the logic of abductive reasoning, we can follow the explicit signs of the activities of the members of the sustainability working group to the creation of the working group and reflect these on the prevailing theoretical knowledge. By following these explicit signs of activity, we can enter into the practical lives of the members of the working group and follow what they do in their socio-material environment as they create the new working group in relation to its organisational context (i.e. social and material structures and structuring) (Langley & Abdallah, 2011; Sandberg & Tsoukas, 2011; Stigliani & Ravasi, 2012).

Different socio-material interaction forums, like meetings or workshops, allow group members to read social cues, make and give sense of the present situation and craft their roles and professional identities within it (Stigliani & Ravasi, 2012;

Weick, 1995). Therefore, the empirical setting of this research was conducted around facilitated workshops to focus on social interaction forums as they function as a collective sensemaking arena (Farnsworth & Boon, 2010; Parker & Tritter, 2006; Stewart et al., 2023a). Through verbal and non-verbal communication, participants can gather information about the expectations, norms, and values prevalent in the organizational context (Gustafsson, R., 2023). Social cues include not only the explicit content discussed but also the tone, body language and relational dynamics sensed and observed during meetings (Beyes et al., 2022; Gustafsson, R., 2023; Kudesia & Elfenbein, 2013). Furthermore, individuals can contribute their expertise and perspectives, thereby shaping their professional identities as members of the sustainability working group. They can also observe how others position themselves within the group and adjust their own professional identities accordingly to ensure effective group performance through collective capabilities (Pratt, 2003; Van Der Vegt & Bunderson, 2005). By engaging in these interactions, individuals foster collective understanding and facilitate the successful implementation of sustainability initiatives (Aguinis & Glavas, 2019).

This research aims to answer the following question: How does sustainability working group identity creation unfold during its early stages? Answering this question requires examining the interplay and phases of conscious cognitive, emotional and unconscious cognitive processes involved in group formation, following suggestions from Healey et al. (2015) regarding the unconscious cognitive and emotional processes (i.e. X.systems) and conscious cognitive processes (i.e. C-systems) appearing in groups. According to sensemaking theory, there is a certain time, place and order in organizing organizational issues, creating a logic of practice for certain actors (Maitlis, 2005; Sandberg & Tsoukas, 2011, 2015; Weick et al., 2005; Weick, 1995). By uncovering the stages of collective sensemaking during group identity creation, this research can develop a new theoretical and practical understanding of how to manage sustainability strategy implementation processes. Recent research into various sensemaking types supports the aims of this research by providing an holistic analytical framework for collective sensemaking that can be utilised in the early stages of group identity formation (Sandberg & Tsoukas, 2020). Therefore, this research poses two sub-questions related to the main question that further focus the research:

1. How do different sensemaking types emerge in the early stages of group identity formation?

2. How does the interplay of conscious cognitive, emotional and unconscious cognitive processes unfold in the early stages of group identity formation?

Sustainability introduces a complex challenge in strategic decision-making and systems management, exacerbated by the enduring asymmetric dominance of the economic viewpoint supported by the institutionalized norms built-upon legislation within organizations. This dominance has given rise to economic power structures that prioritize financial gain, creating a tense decision-making environment for sustainability working groups, engaging with a multitude of stakeholders, both internal and external.

Many might have experienced frustration in working groups where fundamental tasks, participant roles, and goals were unclear, resulting in minimal outcomes. The incorporation of the three pillars of sustainability—social, environmental, and economic—into an organizational decision-making process adds further tension, challenging the formation of effective sustainability working groups. As we confront the monumental challenges brought about by industrial history, addressing this ambiguity becomes an urgent priority. In practical terms, formulating an effective protocol for establishing sustainability working groups is crucial.

At the same time, theoretically speaking, deepening our understanding of group identity creation is pivotal for launching and managing these groups effectively from their early stages. This knowledge enables organizations to respond swiftly to market demands, optimize resources, innovate processes, engage stakeholders, mitigate risks, and ensure compliance with evolving sustainability standards. The demand for such insights has never been more pronounced, given the pressing nature of the challenges we currently face

2 Introduction to the sensemaking literature in the context of sustainability working group creation

According to Weick (1995), sensemaking is activated when people's "everyday cosmos" is disrupted. In this context, the cosmos represents a place, time and structural order governing the interactions and activities of actors in an organizational system. An organization functions as an adaptive system where cultural hybrid identity and power structures influence people's habitual thinking, interpretations and actions through collective sensemaking (Grote et al., 2018; Heaphy, 2017; Rerup et al., 2022; Schein, 2010; Vaara & Whittle, 2022). Cultural hybrid identity is guarded by systemic power which is structured during the organizational history in relation to its environment through the organizational actors' social decision-making and influencing in the organizational system (Clark et al., 2010; Maitlis, 2005; Schildt, Mantere, & Cornelissen, 2020; Turner, 2005). Hybrid identity refers to the interpretation of the organizational identity in relation to multiple stakeholder expectations within different contexts in the organization (Foreman & Whetten, 2002; Pratt, 1998; Whetten & Godfrey, n.d.). This interpretation includes various narratives and meanings, although there is typically one overarching narrative conveyed by the top management (Cornelissen & Werner, 2014; Foreman & Whetten, 2002). According to Turner (2005), systemic power is often taken for granted as a more permanent form of power that continuously influences actors' habitual ways of thinking, feeling and acting. Individuals, groups, and organizations are constantly striving to avoid identity threats to ensure their existence and satisfy their socio-emotional needs. Consequently, the mechanism of ongoing collective sensemaking is inherently intertwined with systemic power, which leads to the accumulation of collective knowledge concerning social rules and accepted role scripts in the organizational context. This knowledge helps to mitigate multilevel identity threats of collective through stakeholders' legitimation (Ashforth & Mael, 1989, 1996; Foreman & Whetten, 2002; Ravasi & Schultz, 2006; Turner, 2005).

The purpose of the sensemaking is to create a sense of a "more ordering world" (Maitlis & Christianson, 2014) within ambiguous situations at the intrasubjective, intragroup or intergroup level within a specific organizational context (Aguinis & Glavas, 2019; Sandberg & Tsoukas, 2020; Weick, 1995). Therefore, sensemaking relies on social and material structures that facilitate the process of sensing through our sensory system. This process gives rise to cognitive mental models, and communication and shared understanding of the situation develop among the actors (Beyes et al., 2022; Weick et al., 2005). Sensemaking is an ongoing process that never stops, which is why the term "structuring" is frequently used in relation to organizing issues within organizations. The socio-material system surrounding the actors is in a constant state of becoming due to the continuous interpretations and adjustments made by the actors (Orlikowski, 2000; Sandberg & Tsoukas, 2011, 2015, 2020; Weick et al., 2005).

Sensemaking and organizing are in a dialogical relation with the emergent decision-making (Ahrne & Brunsson, 2011). Decisions can be viewed as impulses that disrupt or disturb the current balance of the organizational system by introducing changes to the rules and objectives of activities. These disturbances manifest through the relational work of individuals, groups or organizational units within a specific socio-material context (Kahn et al., 2018; Orlikowski, 1992, 2000, 2007). For instance, a new work group may be formed, someone may disengage from cooperation or people's focus may shift from social interactions to utilizing a digital platform instead of face-to-face interaction with others. However, the underlying purpose of these social actors' activities is to reorganize a new systemic balance in relation to the perceived organizational environment with the aim of satisfying their socio-emotional needs (Golden-Biddle, 2020; Turner, 2005; Weick et al., 2005).

Reorganization occurs through the actors' socio-material organizing activities, influenced by situational power dynamics that emerge during their interactions, leading to cognitive and emotional resonance (Giorgi, 2017; Kouamé et al., 2022; Orlikowski, 2000; Sandberg & Tsoukas, 2011; Turner, 2005; Weick, 1995). Cognitive resonance is achieved through the alignment of actors' cognitive models, resulting in shared mental models among them, while emotional resonance is based on the alignment of emotional and unconscious processes, generating positive feelings among actors (Giorgi, 2017; Healey et al., 2015). The alignment of mental models and emotional and unconscious processes produces systemic resonance, leading to coherence and smoother interaction processes among the actors in the given context (Bacharach et al., 1996; Healey et al., 2015; Kouamé et al., 2022). However, the process of organizing under group identity creation remains relatively unexplored. Cognitive and emotional resonance is sensed through collective sensemaking, which has been a somewhat underdeveloped aspect of sensemaking,

partly due to divided research streams focusing on cognitive and constructivist sensemaking (Heaphy, 2017; Vaara & Whittle, 2022).

2.1 The different types of sensemaking

As mentioned above, Sandberg and Tsoukas (2020) argued that sensemaking research has been divided into cognitivist and constructivist approaches. According to the authors, the cognitivist approach views sensemaking as an actor's attempt to interpret changed situational cues using existing mental schemes and models. Cognitivists are primarily interested in how these mental structures are reconstructed episodically in response to sensemaking triggers (Maitlis & Christianson, 2014, pp. 94-95). The constructivist approach, however, focuses on ongoing discourses and the socially constructed shared understanding that emerges in response to sensemaking triggers. The constructivist perspective emphasizes the continuous nature of sensemaking and the construction of meaning through social interaction (Sandberg & Tsoukas, 2020, p. 2).

Sandberg and Tsoukas (2020) suggested that while these two mainstream approaches have contributed to the understanding of sensemaking, there is a need for more precision and clarity regarding different sensemaking types and their ontological questions. They argued that a more comprehensive understanding can be achieved by considering the nature of the actor–world relationship, which goes beyond the perspectives offered by the existing mainstream approaches. The authors have called for a more nuanced and comprehensive exploration of sensemaking that transcends the boundaries of the cognitivist and constructivist perspectives to provide a more holistic understanding of the complex interplay between actors and their world.

The traditional understanding of sensemaking has focused on the deliberate search for restoring interrupted activities (Maitlis, 2005; Maitlis & Christianson, 2014; Sandberg & Tsoukas, 2015; Weick, 1993; Weick et al., 2005). However, Sandberg and Tsoukas (2020) proposed reframing sensemaking by identifying four different types: immanent, involved-deliberate, detached-deliberative and representational sensemaking. Immanent sensemaking serves as the foundational type upon which the other three types are built. The first three types occur within the primary practice world, where actors are actively engaged in their actions and sensemaking. In contrast, representational sensemaking takes place in the secondary practice world, where observers make sense of the actors' sensemaking process. In this context, observation becomes an active action as observers strive to understand and interpret the sensemaking activities of the actors within the primary world. This classification of sensemaking types provides a more nuanced understanding of the mechanism of sensemaking and highlights the different contexts and perspectives

involved. It emphasizes the active role of both actors and observers in making sense of ongoing activities and highlights the interconnectedness of the primary and secondary practice worlds.

According to Sandberg and Tsoukas (2020), the sense–action nexus remains unified in immanent sensemaking and gradually separates as it moves towards representational sensemaking. In the representational type, actors primarily engage in cognitive-discursive sensing, which leads to a spectatorial sense and strengthens their identity beliefs related to organizational issues. This perspective aligns with Vaisey's (2009) argument that discursive and practical consciousness are intertwined yet separate mechanisms in action. Vaisey suggested that organizational practical consciousness plays a central role in instant and intuitive decision-making, and the knowledge capital embedded in organizational identity is utilized to justify moral choices and actions. Therefore, interpretations, such as what is favoured and what is not, are grounded in the organizational logic of practice, sensed through immanent sensemaking, even at the group level (Sandberg & Tsoukas, 2011; Spears, 2021; Vaisey, 2009).

This understanding highlights the ongoing interplay between sensemaking, action and the formation of identity beliefs within organizations. It emphasizes the importance of both the individual and collective sensemaking processes in shaping organizational behaviour and decision-making (Hodgkinson & Healey, 2011; Sandberg & Tsoukas, 2011, 2020; Vaisey, 2009). A group's identity beliefs serve as a central behavioural code, making people's everyday interactions and daily work more fluent (Golden-Biddle, 2020). They also form a core part of organizational knowledge capital, including organizational memory and cultural scripts (Alvesson & Willmott, 2002; Ashforth & Mael, 1996; Schein, 2004; Schein, 2010).

However, organizational knowledge capital forms the "cultural repertoire", which helps us construct appropriate role scripts for working together in a specific societal context (Kahn, 1990). People primarily sense organizational knowledge capital unconsciously through the reflexive X-system, utilizing emotional data and signs, and secondarily through the slower reflective C-system, manifested through social discourse (Barsade & O'Neill, 2014; Gustafsson, R., 2023; Lieberman, 2007; Vaisey, 2009). Social discourse is generated through narratives, allowing individuals to make sense of past experiences, give them meaning and subsequently store them as silent knowledge under the control of the reflexive X-system (De Luca Picione & Valsiner, 2017; Lieberman, 2007). The core of social narratives and scripts produces more enduring organizational identity claims, reflecting the conscious cognitive aspect of actors' logics of practice (Bacharach et al., 1996; Kahn, 1990; Kahn et al., 2018; Sandberg & Tsoukas, 2011). However, actors' logics of practice also operate under reflexive socio-cognitive processes, manifested through nonconscious and emotional responses, such as displayed emotions in situ (Hodgkinson & Healey,

2011; Lieberman, 2007; Sandberg & Tsoukas, 2020). These processes contribute to the overall sensemaking dynamics within organizations, involving both conscious cognitive interpretations and nonconscious and emotional responses (Healey et al., 2015).

Furthermore, contextual awareness and the recognition of "otherness" within the organization allow individuals to perceive the boundaries between "us" and "them", "me" and "you", "now" and "then" or "here" and "there" (De Luca Picione & Valsiner, 2017, p. 537). Otherness refers to something that is different from oneself, and it can be perceived through experiential or cognitive dissonance related to the practical logic in each situation. Understanding the boundaries of one's own primary social group is crucial for identification and multilevel sensemaking as it contributes to the maintenance of existential and cognitive order (Oliver, 2015; Sandberg & Tsoukas, 2011).

Interestingly, organizational tensions often emerge at these boundaries, paradoxically separating and integrating different subgroups' cultural identities, such as the sustainability working group's sub-identity and its logics of action in relation to the focal organizational identity (Ashforth & Reingen, 2014). Immanent sensemaking is necessary to uphold the shared sense and understanding of what it means to be part of the organization despite the cultural identity differences among subgroups. Narrative sub-cultural boundaries are formed through organizational normative discourse, ultimately leading to the development of a spectatorial sense (Ellemers et al., 1999; Meyer & Parfyonova, 2010). These boundaries are important for organizational creativity and a sense of wholeness (Sandberg & Tsoukas, 2020). However, immanent sensemaking offers a common contextual sense that addresses the core integrating similarities and differences of organizational identity at an unconscious level (Gioia et al., 2010; Sandberg & Tsoukas, 2020). It allows individuals to navigate and make sense of the organizational dynamics, fostering a shared understanding despite the aforementioned diverse cultural identities present within the organization.

Practical consciousness is deeply constructed through our reflexive neural sensing related to environmental data, like emotions, audio-visual signs or even social structures in which we are involved in the present moment (Beyes et al., 2022; Gherardi, 2023; Lieberman, 2007). This is in contrast to discursive consciousness, which allows us to operate in the past or in the future, not in the present moment (Lieberman, 2007). Immediately when we start to verbalize our acts, we start to utilize retrospective or prospective sensemaking grounded in higher-order sensemaking types than immanent sensemaking, which occurs only at the present moment (Sandberg & Tsoukas, 2020). However, organizational emotions are sensed through immanent sensemaking in the present moment (Kouamé & Liu, 2021; Sandberg & Tsoukas, 2020).

Interestingly, organizational emotions are closely linked to unconscious interpretations associated with cultural identity (Salvatore & Venuleo, 2008; Vaisey, 2009). Emotions are contagious and have a strong impact on our cognitive interpretations during an organizational change (Bartunek et al., 2006). Routines, work roles and artefacts form an organic socio-technical network that supports individuals' sense of contextual rationality, helping actors to forecast and navigate complex organizational systems (Sandberg & Tsoukas, 2011). When the group or individual acts contrary to the organizational cultural identity and its logic, this triggers negative emotions and experiential dissonance in response to the logical inconsistency in the situation (Bacharach et al., 1996; Salvatore & Venuleo, 2008).

Experiential dissonance occurs before individuals or groups are able to articulate the observed misalignment between their expectations and the current state of affairs (Lieberman, 2007). For example, a working group may realize that stakeholders have higher expectations than what the group can realistically achieve given the available resources. Experiential dissonance is sensed through immanent sensemaking, which can bring silent organizational tensions to the surface through higher-order sensemaking types (Haffar & Searcy, 2019; Sandberg & Tsoukas, 2020). Tensions related to the organizational cultural identity can be both visible and silent, but only the visible tensions, manifested through cognitive dissonance, can be addressed through cognitive speech acts (Bacharach et al., 1996). However, silent and visible organizational tensions are largely sensed and managed unconsciously through body movements (Bartunek et al., 2006; Beyes et al., 2022; De Luca Picione & Valsiner, 2017; Salvatore & Venuleo, 2008).

Ashforth and Reingen (2014) argued that mechanisms, such as splitting, projection and projective identification, help groups and individuals mitigate organizational tensions. They also found that acting on organizational routines supports the maintenance of organizational cohesion at the group level and alleviates anxiety in the face of complexity. Organizational routines represent the multi-level logic of practice that is widely shared and accepted through the socialization process of organizational actors (Maitlis, 2005; Sandberg & Tsoukas, 2011). To prevent organizational identity from fragmenting beyond recognition, it is important to sense the similarities related to the organizational practice logic, despite tensions among organizational actors (i.e. individuals, groups).

Salvatore and Venuleo (2007) recognized the state and value of the present moment as being based on emotional sensemaking, which automatically tracks signs of similarities and differences through the emotional cues within the environment. Similarities resonate with the actors' current logic of practice, making the sensemaking experience in situ easier by eliciting positive emotions (Kouamé et al., 2022). Conversely, perceived differences evoke a feeling of unease or anxiety in the face of the unknown (Tajfel & Turner, 1979).

The dissertation has provided a general overview of the four different sensemaking types. Next, it will delve into the specifics of each typology to gain a deeper understanding of the dynamics of sensemaking. This examination will begin with immanent sensemaking, which serves as the foundational ongoing mechanism of processual sensemaking, and then progressively transition from primarily bodily sensing to a state of primarily cognitive-discursive sensing.

"Immanent sensemaking enacts routine activities; involved-deliberate sensemaking restores interrupted activities; detached-deliberate sensemaking reviews failed or problematized activities; and representational sensemaking explains problematic or problematized activities" (Sandberg & Tsoukas, 2020, p. 17).

2.1.1 Immanent sensemaking

Immanent sensemaking enables habitual acting, and during the environmental change, it also creates feelings of continuity and stability by utilizing our bodily and cognitive schemas from the past (Maitlis et al., 2013; Maitlis & Sonenshein, 2010; Salvatore & Venuleo, 2008; Sandberg & Tsoukas, 2020; Yakhlef & Essén, 2013). Our body is the first interaction channel with the world, and we unconsciously and consciously gather information from our environment through the sensory system, comparing it with existing schemas in situ (Beyes et al., 2022). Space and movement are also sensed during group interactions by sensing stability related to socio-material space and actors' body movements around us (Beyes et al., 2022; Beyes & Holt, 2020). Additionally, stability is sensed in relation to the cognitive-discursive action of the collective in the form of more permanent cognitive mental models (i.e. rules, rituals, beliefs) that guide routine daily activities (Sandberg & Tsoukas, 2020).

However, stability and constancy are overlooked phenomena in the organizational sensemaking literature, most probably due to their embodied nature and underdeveloped methodologies, with a few exceptions (Beyes et al., 2022; Gylfe et al., 2016; Kouamé & Liu, 2021; Sandberg & Tsoukas, 2015). For example, Grote et al. (2018) emphasized the dualistic nature of stability and flexibility by presenting their paradoxical coexistence during team adaptation. According to them, rules, rituals and habitual actions might release resources to solve complexity, eventually leading to adaptation. However, they did not clarify the mechanism underlying these dualistic processes of continuity and change. Interestingly, the findings of Uitdewilligen et al. (2018) implicitly underlined the meanings of stability and continuity by unveiling the strengthening action patterns of team members as a behavioural response to task stimuli, emerging as a moment-to-moment process that improves team effectiveness.

Interestingly, Yakhlef and Essén (2013) identified practical resistance as a source of bodily innovations in elder care. In the organizational literature, resistance has

often been associated with negative connotations, and its meaning has been overlooked due to the focus on its harmful effects in organizational life (Sarala et al., 2019). The nature of resistance becomes more understandable when approached from the organizational logic of practice, as proposed by Sandberg and Tsoukas (2011). According to them, the organizational system follows its practical logic while striving to maintain its inner experiential and cognitive coherence in relation to the environment, preventing it from taking thoughtless reactive actions. It is worth noting that the logic of practice is shaped by the organization's history and is built upon collective wisdom derived from collective problem-solving and learning, ensuring habitual action and intuitive decision-making in the present moment (Sandberg & Tsoukas, 2020; Vaisey, 2009).

However, inherent sensing is the primary mechanism for collecting data related to the current state of organizational dynamics (Beyes et al., 2022; Gherardi 2023). It unconsciously guides actors' attitudes, actions, being and decision-making towards more coherent logics of action within a specific organizational system (Bacharach et al., 1996; Lieberman et al., 2001). According to Yakhlef and Essén (2013), bodily innovations are created through sensing the systemic balance of current activities between the practical and abstract worlds of actors in the organizational context. The authors suggested that actors sense bodily how things ought to be or what should be done in surprising moments when the flow of activity is interrupted. The authors found that elder care nurses intuitively sensed the right way to execute care services without much conscious cognitive thought. In a rather remarkable manner, practical resistance manifested in moments of improvisation, when formal organizational rules were not working as planned due to a lack of silent knowledge related to the actors' practical world. Such improvisational micro-innovations may further institutionalize through a legitimization process, taking the form of systemic power (Turner, 2005; Yakhlef & Essén, 2013).

However, practical organizational rules, rituals and stable socio-material structures are guarded by systemic power, which is produced during the history of organizational decision-making (Balogun et al., 2011; Schein, 2010; Schildt, Mantere, & Cornelissen, 2020; Turner, 2005). It is worth noting that systemic power is not solely bureaucratic; it shapes actors' activities towards practical rationality on the basis of the cumulative wisdom of the organizational society (Turner, 2005). Technology-in-use serves as an example of this practical rationality. While many technological devices have numerous features, only some of them are utilized according to the users' experiences and habitual actions (Jarzabkowski, 2003; Orlikowski, 2000). Thus, the target of practical resistance may be managerial sense-giving that is not aligned with the organizational logic of practice and practical systemic power (Bacharach et al., 1996; Gioia & Chittipeddi, 1991; Orlikowski, 2000; Sandberg & Tsoukas, 2011; Turner, 2005; Yakhlef & Essén, 2013).

Finally, systemic power appears to be sensed through immanent sensemaking, representing a more permanent way of organizing activities within a specific organizational system (Sandberg & Tsoukas, 2020; Turner, 2005). Interestingly, it can hinder moment sensing (i.e. sense-censoring) and reinforce strategic inactivity (Cunliffe & Coupland, 2012; Whittle et al., 2016). Managerial rhetoric serves as an example of sense-censoring during moments of systemic change, where rhetoric as a management tool is aimed at creating a spectator-like perception that contradicts actors' lived experiences. In other words, the actors may sense that the old way of doing things is no longer effective or sustainable, but management convinces them otherwise for strategic reasons.

However, immanent sensemaking appears to be based on the affective tone related to institutional forces, cultural assumptions, action patterns and systemic power inherent in the organizational practical logic, which forms the foundation of continuity amidst change (Gherardi, 2017; Maitlis & Sonenshein, 2010; Mantere et al., 2012; Sandberg & Tsoukas, 2020; Schildt H, Mantere S, Cornelissen J., 2020). The practical logic is shaped by the organizational history and the cultural identity formed in relation to the organizational system and environment (Bacharach et al., 1996; Sandberg & Tsoukas, 2011; Schein, 2010). Furthermore, it seems that immanent sensemaking is necessary for seeking emotional resonance, which can shed light on the mechanisms of practical resistance during a change (Gersick & Hackman, 1990; Giorgi, 2017; Sandberg & Tsoukas, 2020).

2.1.2 Involved-deliberate sensemaking

The second sensemaking type, following Sandberg and Tsoukas's (2020) types, is involved-deliberative sensemaking, which occurs when actors perceive a dissonance between the current logic of practice and the presented sensegiving imperative. This realization leads to a loss of absorbed coping, disrupting actors' habitual actions and prompting them to innovate new ways of continuing their activities (Balogun et al., 2011; Yakhlef & Essén, 2013). Contextual sense development occurs through involved-deliberative sensemaking, providing a framework for actors to sense different forms of power, collective mental models and emotional and unconscious systems (Healey et al., 2015; Hodgkinson & Healey, 2011; Sandberg & Tsoukas, 2020; Turner, 2005). The dissonance between the current logic of practice and the presented logic prompts actors to focus on interrupted activities to make sense of the situation and determine the necessary actions to proceed (Sandberg & Tsoukas, 2020).

Contextual sense primarily develops through an iterative process where actors sense and act, using their sensory system, to adjust their bodily and unconscious cognitive structures to better fit the changed situation (Beyes et al., 2022;

Uitdewilligen et al., 2018; Yakhlef & Essén, 2013). Systemic power is intertwined with the organizational logic of practice and is sensed through immanent sensemaking, which serves as the underlying mechanism and framing mirror for involved-deliberative sensemaking (Sandberg & Tsoukas, 2011, 2020; Schildt, Mantere, & Cornelissen, 2020; Turner, 2005). The organizational logic of practice develops through experiential learning in relation to the organizational environment and its events (Gherardi, 2001, 2017; Golden-Biddle, 2020; Orlikowski, 2000). Actors interpret the organizational logic of practice through their subjective world. Thus, in the practical world of actors, the organizational logic is socially constructed, and individuals create a subjective meaning for it through their own identity, work role and experiential history (Kahn, 1990; Rerup et al., 2022; Weick et al., 2005). That also explains why the experiential reality of organizations is fragmented, further challenging the fit of management activities in practice (Hay et al., 2021; Huy, 2011).

Once contextual sense has emerged, cognition comes into play to recognize the dissonance between the current logic of practice and the emerging one, and to determine the learning needed at a conscious level (Sandberg & Tsoukas, 2020). Importantly, the interplay between different sensemaking types is an ongoing iterative process. However, the previous management literature has often overlooked the interplay between reflexive X-processes and reflective C-processes of actors, likely due to underdeveloped methodologies in researching emotional and preconscious processes (Beyes et al., 2022; Brundin et al., 2022). However, sensemaking types might help scholars fill a gap between the discourse and experiential reality of actors. Next, the third and final primary practice world's sensemaking type is discussed – namely, detached-deliberative sensemaking, which has been the primary source of organizational sensemaking research (Sandberg & Tsoukas, 2015, 2020).

2.1.3 Detached-deliberative sensemaking

Detached-deliberative sensemaking is predominantly a cognitive and discursive process that allows actors to distance themselves from their experiences. It involves reflecting on one's thoughts, attitudes, beliefs and assumptions, as well as changes in the socio-material world (Lieberman, 2007; Sandberg & Tsoukas, 2020). The purpose of detached-deliberative sensemaking is to re-examine problematic organizational situations and seek explanations for past events, temporarily separating them from the actors' practice world (Sandberg & Tsoukas, 2020). Reflective discussions in this process generate discursive consciousness, enabling actors to plan and establish normative rules for more effective cooperation or to innovate and improve organizational processes (Lieberman, 2007; Sandberg & Tsoukas, 2020).

However, detached-deliberative sensemaking is activated when the organizational flow of issues breaks down and the actors' taken-for-granted world gradually or suddenly disappears from their consciousness (Sandberg & Tsoukas, 2020). For instance, in her research on a large hospital's change process, Golden-Biddle (2020) uncovered that moments of surprise led to moments of doubt, triggering reflections on current cognitive models and related habitual activities. This recurrent abductive process eventually resulted in broader organizational changes in care processes. Importantly, these moments of surprise were generated through practical consciousness as top management gained personal socio-material experience by immersing themselves in the care process. In other words, empirical evidence showed that the top management was unable to develop a new discursive consciousness until they developed practical consciousness through personal experience, recognizing the gap between the imagined and practical worlds (Golden-Biddle, 2020).

In addition, Uitdewilligen et al. (2018) speculated that reflective moments during team adaptation may improve team performance over time by enhancing the development of contextual and conceptual sense. They implicitly acknowledged the significance of the dialogical and reciprocal relationship between practical and discursive consciousness in team adaptation (Uitdewilligen et al., 2018). This aligns with Sandberg and Tsoukas's (2020) types and their interconnectedness, as well as Lieberman's (2007) argument regarding the development of practical and discursive consciousness. In addition, Healey et al. (2015) proposed that reflexive emotional and unconscious cognitive processes (X-processes) and conscious cognitive processes (C-processes) are intertwined within teams, with reflexive emotional and unconscious team processes having a dominant impact on reflective conscious cognitive models in intra-team coordination, thereby affecting team performance. According to the authors, implicit attitudes, stereotypes, and shared preconscious goals are part of reflexive team systems, while shared task and team mental models are part of reflective team processes. Interestingly, reflexive emotional and unconscious processes seem to be rooted in inherent sensing (Beyes et al., 2022; Healey et al., 2015; Sandberg & Tsoukas, 2020; Vaisey, 2009). When considering sensemaking types, the underlying mechanism can be understood through immanent and involved-deliberative sensemaking, which in turn contributes to the development of contextual sense (Beyes et al., 2022; Healey et al., 2015; Sandberg & Tsoukas, 2020; Vaisey, 2009). Reflective conscious cognitive processes, however, primarily rely on detached-deliberative sensemaking, leading to the development of conceptual sense (Healey et al., 2015; Sandberg & Tsoukas, 2020).

Finally, the ontology of detached-deliberate sensemaking is based on reflective and future-oriented prospective sensemaking, where actors reflect on past experiences or imagine the future (Sandberg & Tsoukas, 2020). Actors pragmatically

reflect on activities in a chronological manner, situating them in the past, present, or future. Significantly, the existential temporary perspective remains present as actors simultaneously engage in bodily experiencing the primary world of activities while reflecting on and developing their cognitive-discursive sensing (Sandberg & Tsoukas, 2020).

2.1.4 Representational sensemaking

In contrast to the three types above, representational sensemaking occurs in the secondary world of actors, where they are disconnected from the time pressure of change situations (Sandberg & Tsoukas, 2020). In this secondary world, actors review and reflect on their experiences, and the sense they make is disconnected from immediate action (Sandberg & Tsoukas, 2020). The subject–object relationship is completely disconnected, allowing actors to develop a post-hoc spectatorial sense of different patterns of action (Brown, 2004; Sandberg & Tsoukas, 2020). Authority power often comes into play when actors seek social acceptance or try to persuade the organizational audience on behalf of top management or other authorities (Boje, 1995; Brown, 2004; Turner, 2005).

Weick's (1995) original thoughts on sensemaking emphasized the role of actors' actions in producing embodied interpretations of organizational issues. In contrast, representational sensemaking focuses on interpreting the production of issues from the secondary world of actors and reducing ambiguity by constructing plausible identity stories about them (Brown et al., 2015). Through representational sensemaking, actors author their own experiences, and this can be viewed as an exercise of power within social situations (Boje, 1995; Brown, 2004; Brown et al., 2015; Turner, 2005). These multiple organizational stories create systemic power dynamics over time, influencing actors' interpretations and activities in their specific contexts (Turner, 2005).

It is worth noting that organizational research often relies on representational sensemaking, where researchers seek to understand the sensemaking of actors in their practical world by listening to their organizational storytelling about specific episodes (Boje, 1995). Moreover, organizational research methodologies heavily rely on post-hoc interviews or surveys conducted with top management, which inherently represent the subjective power dynamics among actors (Sandberg & Tsoukas, 2015). Next, the dissertation will examine the literature review, which focuses on the process of group identity formation during the early stages of group formation.

3 The process of group identity creation in the early phase of group formation

Group identity creation occurs through the interplay of multiple levels of identity work among the group members, which is based on the mechanism of identification (Albert, 1998; Albert et al., 1998; Alvesson et al., 2008; Alvesson & Willmott, 2002; Ashforth et al., 2008; Ashforth & Mael, 1989; Whetten, 2006a). The practical way to implement sustainability management is by establishing a sustainability working group, and the process of identity creation within this group, specifically related to its stakeholders, is the focus of this research. The term "stakeholders" in this research refers to individuals, groups of actors, institutions or anyone who may have expectations of the emerging working group and its actions (Scott & Lane, 2000). Stakeholders can be considered outgroup factors that play a role in regulating the establishment of a group identity through an outward sensemaking process. While the primary focus here is on intragroup phenomena, it is important to briefly acknowledge the influence of outgroup regulators and their potential effects on the formation of the group identity. By acknowledging the role of stakeholders as contextual elements, we gain a more comprehensive understanding of the complexities involved in the process of group identity creation. A group consists of people interacting face-to-face with each other in relation to shared group tasks, who may share significant social attributes related to group members' self-identity (Mackie & Smith, 2017; Tuckman & Jensen, 1977).

Group identity is a recognizable feature of the group based on collective practices and intertwined group-based emotions that distinguish the group from its environment, serving as an object for individual actors' identification (Ashforth et al., 2008; Fiol & Romanelli, 2012). If an actor identifies with the group, they will incorporate certain attributes of the group into their self-identity and engage in extra-role performance on behalf of the identified target (Ashforth & Mael, 1989; Eisenberger et al., 2001; Kreiner & Ashforth, 2004; Meyer & Parfyonova, 2010; Rhoades et al., 2001). Furthermore, through identification, the actor may include the group's values, goals, beliefs, stereotypical traits, skills, abilities and knowledge in their core identity (Ashforth et al., 2008). Additionally, the broad

concept of identity suggests that the actor may adopt certain behavioural attributes as a result of strong identification (Ashforth et al., 2008; Kreiner & Ashforth, 2004). However, it is important to recognize that the actor may be part of the group and act as such without identifying with the group, or even when they are disidentified, meaning that they do not perceive themselves as belonging to the group (Kreiner & Ashforth, 2004). This specific scenario will be the focus later in this chapter. It is also important to note that group phenomena are distinct from interpersonal phenomena among group members as the former are products of interpersonal dynamics (Terry et al., 2000).

The group identity can be objectively described by observing the behavioural acts and decision-making history of the group members, which take on certain patterns related to habitual actions, collective beliefs, rules and emotional dynamics displayed through emotions (Ashforth & Reingen, 2014; Fiol & Romanelli, 2012; Golden-Biddle, 2020; Sandberg & Tsoukas, 2011, 2020). Individuals continuously evaluate the value of group membership for themselves, projecting their own beliefs, displaying emotions and engaging in cognitive speech acts during interactions that affect the ingroup dynamics (Abrams & Hogg, 2017; Ashforth & Reingen, 2014; Herrbach, 2006; Mackie & Smith, 2017; Terry et al., 2000). Despite the objective nature of group identity, there is still a subjective experiential feature that is felt through the recursive loop of actors' perceptions and social actions, which continuously affects the group dynamics (Gioia et al., 2010; Golden-Biddle, 2020). Healey et al. (2015) described these dynamics as intertwined processes involving conscious cognitive C-systems and unconscious cognitive and emotional X-systems, drawing on the parallel-competitive dual-systems theory.

Interestingly, collective practices within a group are organized around the group's basic task(s) and mission, leading to a certain normative logic of practice and the emergence of group-based emotions (Bacharach et al., 1996, 1996; Barsade & Gibson, 1998; Mackie & Smith, 2017; Maitlis et al., 2013; Sandberg & Tsoukas, 2011; E. R. Smith & Mackie, 2015; Weick et al., 2005). The normative logic of practice is formed through multiple identity negotiations, which are based on social comparison and categorization if the group is significant to its members (Abrams & Hogg, 1990; Gioia et al., 2010; J. R. Smith & Terry, 2003; Terry et al., 2000). Social comparison is related to individuals' identity work, where they craft their social and personal identities in comparison to significant others (Abrams & Hogg, 1990). Social identities are partly shared with ingroup members, while personal identities are unique and are used to process emotional and cognitive appraisals (Ashforth et al., 2008).

In the early phase of sustainability working group formation, the targets of "greener" identification, referring to the groups contributing to an actor's social

identity construction around sustainability, might be scarce. Individuals express themselves through their professional identities and values, continuously seeking feedback through their role-playing on how their social identity is accepted in the group and how well their self-identity resonates with the fragments of the emerging group identity and its future-oriented strategic sustainability initiatives (Ellemers et al., 1999; Kahn, 1990; Ravasi et al., 2020). The lack of a developed adult group identity complicates the cognitive and emotional resonance seeking and cooperation among group members (Fiol & Romanelli, 2012; Gioia et al., 2010; Kouamé et al., 2022).

Emotional resonance is based on emotional contagion and the sensing of emotional and subconscious cognitive similarities and differences, leading actors to detect potential interactional connections between different group members (Barsade, 2002; Giorgi, 2017; Healey et al., 2015; Mackie & Smith, 2017). Cognitive resonance is based on self-categorization and the actors' need to find similarities in their cognitive mental models during their social identity formation (Elfenbein, 2014; Giorgi, 2017; Kouamé et al., 2022). However, the principle of metacontrast, based on a single-process model of social influence, suggests that actors continuously minimize differences within the ingroup and maximize differences between groups in making social comparisons while recreating context-specific norms within the group (Abrams & Hogg, 2017; Terry et al., 2000; Terry & Hogg, 1996). Therefore, the cognitive and emotional resonance seeking in a group is based on an iterative loop of social comparison following a single-process model of social influencing.

To cope with the identity void and uncertainty, the group relies on the past focal organizational identity and logic of practice to determine an appropriate position for the group in relation to organizational stakeholders (Corley & Gioia, 2004a; Gioia et al., 2010). The perceived stakeholder expectations influence the formation of the group identity through individuals' personal identity work in relation to group membership (Ellemers et al., 1999; Fiol & Romanelli, 2012; Kouamé & Liu, 2021). However, the lack of a developed group identity leads to an identity void at the group level, driving actors to make sense of the meaning of their emergent group membership and further co-create it through normative discussions concerning resource allocation (Battisti et al., 2022; Clarke et al., 2009; Meyer & Parfyonova, 2010; Somers, 2009; Terry & Hogg, 1996; Turner, 2005). It is important to note that the identity void represents a moment of sense-breaking, which typically coincides with sense-giving during an organizational change (Ashforth et al., 2008; Gioia & Chittipeddi, 1991). However, individuals' ongoing identity work forms the basis of group identity work and identification, which will be discussed further in the following sections.

3.1 Identity work and identification

Social identity theory (SIT) is a general theory of group processes and intergroup relations suggesting that identification plays a crucial role in shaping actors' behaviour within a group. The development of ingroup norms and the formation of group identity rely on individuals' identification with the group. Identification is the mechanism through which individuals engage in identity work, and it involves the interplay between an individual's social identification and the development of the group identity (Albert, 1998; Alvesson et al., 2008; Ashforth et al., 2008; Ashforth & Mael, 1989; Ashforth & Reingen, 2014; Whetten, 2006a). According to SIT, individuals strive to enhance and maintain positive self-esteem by comparing their status within their own group to evaluations of relevant outgroups (Tajfel & Turner, 1986). However, for identification to occur, individuals must personally perceive the target of identification as significant to them according to their socio-emotional needs (Abrams & Hogg, 1990; Turner, 2005). Additionally, individuals need to perceive and understand the group norms and accept them as part of their social identity to act accordingly (Abrams & Hogg, 1990; Ashforth et al., 2008).

Identification requires a reciprocal relationship between the actor and the target of identification (e.g. working group), where the actor acts on behalf of the target, and the target supports the actor's social identity by providing attributes that strengthen their self-definition and distinctiveness (Ashforth & Mael, 1989; Dutton et al., 1994; Whetten, 2006a). Previous research suggests that the level of social identification is influenced by three intertwined sub-processes: self-categorization, group self-esteem and affective commitment (Ashforth & Mael, 1989; Bergami & Bagozzi, 2000; Ellemers et al., 1999; Tajfel & Turner, 1979). Notably, the self-categorization process includes normative commitment as a sub-process that evolves through an individual's conscious or unconscious interest in joining and acting within the collective, following its logic of practice through sensemaking (Becker, 1960; Meyer & Allen, 1991, 1997; Pratt, 1998; Sandberg & Tsoukas, 2011). Self-categorization serves the need to create and maintain a sense of coherence in relation to the environment and to make sense of multiple identity cues, forming meaningful patterns that guide actions (Abrams & Hogg, 1990, 2017; Weick et al., 2005).

Self-esteem is based on positive feelings derived from belonging to something larger than oneself, being appreciated by others, persisting over time and not being solely reliant on one's own efforts (Abrams & Hogg, 2017; Ellemers et al., 1999). Group self-esteem is evaluated in relation to other groups through the negative and positive connotations attributed to outgroups, which influence the group's social status (Ellemers et al., 1999; Turner, 2005). It is important to note that social status is produced by systemic power within the organization (Turner, 2005). In other words, the processual power of the group leads to its social status. Regarding the establishment of a group identity, systemic power, which is the outcome of authority

and persuasive power processes, does not exist until the group identity formation has generated systemic power. Furthermore, affective commitment represents the emotional attachment to the target of identification, which can result in behaviours such as ingroup favouritism (Ellemers et al., 1999). Affective commitment is discussed in more detail in the chapter "Affective commitment – emotional bond to the group".

However, identification is organization-specific, meaning that certain features of the organization become self-defining attributes for individuals who share similar values with the organization. These shared values contribute to the concept of multilevel identity work among the actors, which is an ongoing process aimed at maintaining a sense of coherence, cognitive alignment and emotional resonance at both the individual and collective levels (Ashforth & Mael, 1996; Sillince & Simpson, 2010; Weick et al., 2005). As described earlier, according to the parallel-competitive dual-systems theory, regarding intragroup relations, group members can achieve resonance between their reflective conscious cognitive processes and reflexive affective processes if there are sufficient similarities between these systems (Giorgi, 2017; Healey et al., 2015). These similarities that cause X-systems and/or C-systems to align can be related to rituals, artefacts, the emotional tone of actors or their beliefs (Giorgi, 2017). Thus, the mechanism of sharing organizational values is important for both the formation of intragroup relations and the development of intergroup relations between the group and its stakeholders (Ashforth & Mael, 1989; Scott & Lane, 2000). Intragroup relations are formed through inward collective sensemaking, while intergroup relations are formed through outward collective sensemaking (Pratt, 2003; Weick et al., 2005).

The actors' multilevel identity work results in multiple abstractions and experiential levels of social identities (Ashforth et al., 2008; Giorgi, 2017; Healey et al., 2015; Kreiner & Ashforth, 2004). These multiple levels of abstraction in social identities may also explain the nuanced dynamics of Kreiner and Ashforth's (2004) findings related to organizational identification, ambivalent identification, disidentification and neutral identification. Their research revealed that actors can experience positive attachment to their targets of identification (identification), simultaneously hold both negative and positive feelings towards their organization (ambivalent identification), maintain a cognitive identification while being emotionally neutral (neutral identification) or reject the attributes associated with their organization (disidentification). Their model aimed to enhance our understanding of the different combinations of identifications and pave the way for future studies examining the effects of various identifications on job-related outcomes.

Next, the dissertation will present a closer examination of self-categorization, which serves as a mechanism for cognitive resonance when individuals seek similarities and detect differences during the process of group identity formation.

3.2 Self-categorization during group identity creation

Self-categorization leads to behavioural congruence among group members through the development of contextual group norms, which are created through social comparison processes (Abrams & Hogg, 1990, 2017; Terry & Hogg, 1996; Turner et al., 1987). Behavioural congruence is related to the group members' feelings, attitudes, and beliefs. During the process of social categorization, individuals make sense of social stimuli by seeking similarities and differences among people, which helps them find meaningful patterns and organize social stimuli (Abrams & Hogg, 1990). It is important to note that perceived identity incongruence can create tensions, which further drive the identity work of individuals as they engage in sensemaking to identify suitable social categories and reduce the gap between their identity and their desired self-definition, as proposed by SCT (Ashforth et al., 2008; George & Chattopadhyay, 2005; Weick, 1995). While individuals strive to find suitable social categories, they do not simply accept social norms as given; instead, they actively contribute to the crafting of norms through the display of emotions and cognitive speech acts before normatively committing to the group (Ashforth et al., 2008). Individuals reflect on group norms in relation to their self-identity and evaluate whether these norms are acceptable at a personal level. Finally, an individual's identification with the group leads to a temporary feeling of oneness with the target of identification, which can strengthen self-enhancement, such as a sense of collective self-esteem (Ashforth et al., 2008; Ashforth & Mael, 1989). It is important to note that in the early phase of group identity creation, there may be a lack of collective self-esteem, resulting in the absence of social status assigned by outgroups to a group that does not yet exist (Ellemers et al., 1999; Turner, 2005).

The temporality of identification has led identity scholars to different perspectives, with some arguing that identification is a situated phenomenon and others suggesting that it encompasses more permanent self-schemas (Ashforth et al., 2008). This research adopts the perspective that identification initially emerges as a situated phenomenon linked to identity cues and socio-emotional needs, which may later become a more permanent feature of one's personality (Albert, 1998; Ashforth & Mael, 1989, 1996; Ashforth et al., 2008; Rhoades et al., 2001; Whetten, 2006b). However, the concept of multi-level social self-categorization, as proposed by SCT, can shed light on the discrepancy among scholars regarding the temporality of identification.

Over the years, SCT has helped scholars understand intragroup processes by focusing on individuals' multi-level social self-categorization (Abrams & Hogg, 2017; Bergami & Bagozzi, 2000; Ellemers et al., 1999; J. R. Smith & Terry, 2003; Terry et al., 2000; Terry & Hogg, 1996; Turner et al., 1987). According to SCT, individuals have three levels of abstraction related to their multiple social identities:

a subordinate level, an intermediate level and a superordinate level (Dick, 2005). The subordinate level represents an individual's personal identity among other actors, influenced by the cumulative experiences and values of significant others (Dick, 2005; Terry et al., 2000). The intermediate level of self-categorization occurs at the group level, where individuals compare and shape their social identity as group members in relation to significant outgroups (Dick, 2005; Terry et al., 2000; Terry & Hogg, 1996). Significant outgroups are valued according to the social, emotional and material needs and values of the ingroup as well as external responses to these (Turner, 2005). Thus, the socio-emotional needs of the group drive individuals' self-categorization in relation to the external environment (Turner, 2005). The superordinate level of self-categorization is related to societal-level comparisons and individuals' identity work, where they define themselves as human beings. Ethical questions, for example, are considered at this level of social identity. Therefore, during the emergence of a working group, individuals' liminal identities are drawn from all levels of their social identity abstractions.

SCT has successfully explained why individuals' attitudes often fail to predict their behaviours (Ajzen, 1991, 2011, 2015; J. R. Smith & Terry, 2003; Terry & Hogg, 1996). Social comparison during self-categorization leads to the creation of context-specific norms within a group, which shape the altering group prototype (Terry et al., 2000; Terry & Hogg, 1996). Moreover, the prototypical group, representing ideal selves (also referred to in Wieland, 2010), influences individuals' feelings and actions more than personal factors when the group is socially significant (Terry et al., 2000). The social significance of the group leads to depersonalization and individuals' adaptation to group behaviour, such as group thinking, explaining why personal attitudes may not align with behavioural ones in a relevant social group (J. R. Smith & Terry, 2003; Wieland, 2010). In other words, the salience of identity within a significant social group explains why people may not follow through on the attitudes they express outside of that social context. The social significance of a group is typically assessed by the strength of group identification (Kreiner & Ashforth, 2004; Terry et al., 2000). However, the social processes of social comparison, the development of context-specific norms and the salience of social identity explain why individuals may favour the group despite disliking some of its members.

The development of one's identity is an ongoing construction process influenced by significant others and the material environment and driven by socio-emotional needs, such as social acceptance, liking, the need for a regulated sense of order, the desire for consistency over time or a feeling of psychological safety (Abrams & Hogg, 1990; Ashforth et al., 2008; Edmondson, 1999; Giddens, 1991). Ultimately, socio-emotional needs drive group behaviour, leading to the development of group norms, and at the individual level, they create pressure to conform and adopt the views of significant others as one's own (Abrams & Hogg, 1990, 2017).

In the organizational environment, significant others are individuals who hold powerful positions or roles according to their legitimacy within the organization (Alvesson & Willmott, 2002; He & Brown, 2013). Individuals construct ideal selves on the basis of the expectations, values and norms of these significant others, resulting in a strong normative component in both personal and social identities (Terry et al., 2000; Wieland, 2010). Ideal selves are shaped by social acceptance manifested in multiple social groups, leading to ongoing identity negotiation between personal and social identities at the individual level in relation to significant social groups (Wieland, 2010). Social identities are displayed within a group, exerting persuasive power that influences others in the group setting (Turner, 2005). Persuasive power is manifested through actors' social skills and emotional intelligence (Turner, 2005).

It is important to note that actors have varied social identities, and the activation of these identities within a group setting can affect the group's identity work (Ashforth & Mael, 1989; Ashforth & Reingen, 2014). Therefore, group identity work is based on the interplay of individuals' identity work between the self and the ideal social identity during the establishment of the group identity within a specific organizational environment and situation. Ideal social selves are formed through group identification, but the lack of a group identity and its norms can complicate individuals' identity work during group formation (Terry et al., 2000; Wieland, 2010).

Next, the dissertation will review the literature on organizational commitment to understand more profoundly the nuanced mechanism of organizational identification in the context of group identity creation.

3.3 Organizational commitment – interplay of normative, affective and continuance commitment during group identity creation

Organizational commitment is a complex phenomenon that is often associated with employee turnover in the literature, making it a crucial factor in the organizational context (Meyer & Allen, 1991; Solinger et al., 2008). It is distinct from external motivation or positive attitudes and can influence individuals' behaviour even without face-to-face connection (Meyer & Herscovitch, 2001). A cognitive abstraction coupled with previous affective attachment to the target is sufficient to activate commitment-driven actions, such as supporting a local sports team. The targets of commitment can vary, ranging from specific change initiatives or teams to the entire organization, and the outcomes of commitment may differ depending on the context of these targets (Meyer & Herscovitch, 2001).

To understand the mechanism of organizational identification, one must examine the antecedents of organizational commitment, which have been

conceptualized in various ways in the literature (Bergami & Bagozzi, 2000; Dick, 2005; Ellemers et al., 1999; Herrbach, 2006; Mercurio, 2015; Meyer & Allen, 1997; Meyer et al., 2002; Meyer & Allen, 1991; Solinger et al., 2008). Recent formulations of organizational commitment have identified three components, building upon Meyer and Allen's (1991) original conceptualization: affective, normative and continuance organizational commitment. These components develop independently but are intertwined, reflecting individuals' different psychological states (Herrbach, 2006; Meyer & Allen, 1991; Meyer & Herscovitch, 2001; Somers, 2009). The antecedents of affective commitment include factors such as the individual's experiences, role clarity and goal clarity. Role ambiguity may challenge affective commitment during the early phases of group formation and likely necessitate clarifying discussions within the group. Continuance commitment is influenced by the personal investments an individual has made in the organization. The perceived costs associated with leaving the group, including alternatives within the organization and the time and energy invested in acquiring organization-specific skills, play a significant role in continuance commitment (Becker, 1960; Meyer & Allen, 1991). Normative commitment, however, is influenced by stakeholder expectations, organizational socialization and the individual's personal experiences and history (Becker, 1960; Meyer & Allen, 1991; Meyer & Herscovitch, 2001).

However, the three-component model (TCM) of organizational commitment has faced critique among scholars, and some have suggested reconceptualizing the model around affective commitment or combining normative commitment with affective commitment. The evidence has shown that affective commitment has the strongest relationship with organizational commitment outcomes, such as on-the-job behaviour and employee health and well-being (Meyer et al., 2002; Solinger et al., 2008). However, this dissertation proposes that the role of normative commitment is significant in the group formation process as a separate concept or as an outcome or mediating mechanism, following (Meyer & Parfyonova, 2010, p. 291) suggestions. When actors face resource scarcity problems, they evaluate stakeholders' expectations regarding the available resources, and the group must establish its values and norms related to resource utilization and decision-making, in line with SCT (Meyer & Parfyonova, 2010).

According to SCT, a group emerges when actors perceive themselves as belonging to the same meaningful social category (Tajfel & Turner, 1979). Therefore, members of embryonic working groups reflect their personal socio-emotional needs through cognitive discourse during intragroup identity negotiation (Rhoades et al., 2001). Normative commitment has been found to strongly correlate with affective commitment, leading some scholars to suggest abandoning its conceptual distinction from affective commitment (Meyer et al., 2002; Meyer &

Parfyonova, 2010). However, Meyer and Allen (1997) proposed that the underlying activation mechanism might explain the strong correlation between affective and normative commitment. Meyer et al. (2002) discovered that while the pattern of correlation was similar, the overall correlation of normative commitment was weaker compared to affective commitment. Additionally, Fischer and Mansell (2009) found in their cross-cultural study that normative commitment correlated more strongly with employee turnover intention than affective commitment did in a collectivist cultural environment. They also observed that norms predicted actors' behaviour more strongly than affective commitment did when the cultural context strongly manifested collectivist characteristics rather than individualistic ones. The cultural discrepancies in different research contexts are likely to further highlight the importance of normative commitment in the future.

Meyer and Parfyonova (2010) argued that the combination of actors' normative commitment and affective commitment produces more positive outcomes, such as well-being at work, turnover intention, organizational citizenship behaviour (OCB) and support for change, compared to affective commitment alone. They proposed that intrinsic motivation is generated by the combined effects of normative and affective commitment. However, normative and continuance commitment produce more externally and internally regulated motivation, where the values underlying the commitment may not be fully accepted, unlike in affective commitment, where full acceptance of the underlying values is present. Therefore, when considering the identity formation process of a working group, it is worth noting that actors' awareness of limited resources to implement change initiatives can lead to compromise within the group, resulting in the establishment of group-specific norms. Consequently, individual actors in the group may feel obligated to act on certain change initiatives without fully accepting the group's decisions and underlying values (Meyer & Herscovitch, 2001).

However, actors' emotional and cognitive resonance seeking is a driving force of affective commitment, fostering emotional bonding that serves as a prerequisite for normative commitment in the early stages of group formation (Giorgi, 2017; Meyer & Parfyonova, 2010; Van Der Vegt & Bunderson, 2005). Nevertheless, the results of commitment research indicate that differences exist between the mechanisms of affective and normative commitment.

To suit the context of this research, there will be no further consideration of continuance commitment, as the perceived cost of leaving is relatively small in the early stages of grouping due to the lack of developed identification and limited invested resources (e.g. knowledge, time, emotional labour) from individuals (Meyer et al., 2002; Somers, 2009). Therefore, what follows is a close examination of affective commitment, which is defined as an important factor in organizational identification. However, in the process of identification, normative commitment also

plays a significant role as part of the self-categorization process. This step will lead us to explore group-based emotions, which can further clarify the mechanisms of group identity creation.

3.3.1 Affective commitment – emotional bond to the group

Affective commitment is considered a prerequisite for identification, but it appears to be a passive state characterized by sensing and feeling, as opposed to identification, which is an active state involving actions on behalf of the commitment's targets (Ashforth et al., 2008; Ashforth & Mael, 1989; Eisenberger et al., 2001; Herrbach, 2006; Meyer et al., 2002; Meyer & Allen, 1991; Meyer & Parfyonova, 2010; Rhoades et al., 2001). Affective commitment is experienced through our sensory system and is based on emotional resonance (Elfenbein, 2014; Giorgi, 2017; Herrbach, 2006; Kouamé et al., 2022). However, while affective commitment is highly relevant for pro-social behaviour and an actor's inclination to act on behalf of others in the group, it does not guarantee action on behalf of the target of affective commitment (Bergami & Bagozzi, 2000). Furthermore, Bergami and Bagozzi (2000) argued that affective commitment is a strong predictor of "engaging in or disengaging from interaction" (p. 563) and measures the emotional significance of group membership for the actor (Van Der Vegt & Bunderson, 2005). Bishop and Scott (2000) identified perceived task interdependence, satisfaction with co-workers and intersender conflict as antecedents of an actor's commitment.

Overall, affective commitment serves as an emotional indicator of the actor's connection to the group and their willingness to engage in actions related to the group's targets. However, it does not guarantee active involvement or commitment to specific actions or decisions within the group.

However, intersender conflict is negatively related to group commitment and arises when an actor faces conflicting requests or is prevented from responding to a request due to organizational policies or rules. This aligns with Kreiner and Ashforth's (2004) expanded organizational identification model, where disidentification was positively associated with perceived intrarole conflict (p. 19). It is worth noting that intersender conflict is often hidden due to actors' personal career ambitions and organizational competition, making it difficult to observe or directly manage within a group (Bishop & Scott, 1996). However, considering intersender conflict may be crucial when establishing sustainability working groups due to their complex nature and the involvement of multiple stakeholders both inside and outside the organization.

Rhoades et al. (2001) discovered that perceived organizational support (POS) strengthens an actor's affective commitment to the organization. According to the

authors, the organizational reciprocity norm creates a sense of obligation to help the organization if the organization meets the actor's socio-emotional needs (e.g. acceptance, liking or respect), which further strengthens the emotional bond with the organization. The reciprocity norm is based on the relationship between "the individual and the organization" and involves the mechanism of transference, where actors project their unconscious needs, attitudes and emotions onto the organization, assuming that the organization possesses human qualities (Levinson, 1965, pp. 376-380). Managerial support, procedural justice and organizational rewards are antecedents of POS, and positive work experiences and organizational social recognition enhance affective commitment (Eisenberger et al., 2001; He & Brown, 2013; Meyer & Allen, 1997; Rhoades et al., 2001).

Eisenberger et al. (2001) found in their research on POS that perceived organizational support was mediated by felt obligation and positive mood, both of which were positively related to affective commitment. The authors suggested that felt obligation facilitates an actor's extra-role performance. It is noteworthy that felt obligation has been included in the attributions of normative commitment in the conceptualizations of Meyer and Allen's (1991) TCM. Meyer and Herscovitch (2001) further strengthened the formulation of normative commitment by emphasizing it as a felt obligation that develops through socialization, where actors internalize norms (p. 317). They also proposed that affective commitment develops when actors realize the value relevance of, or derive their identity from, associating with an entity or pursuing a course of action (Meyer & Herscovitch, 2001, p. 316).

While Eisenberger et al. (2001) did not explicitly use the term "normative commitment" in their research on perceived organizational support, the term "felt obligation" implicitly refers to the conceptualization of normative commitment in Meyer and Allen's (1991) TCM. Additionally, Herrbach (2006) found a correlation between affective commitment and actors' experiences of positive affective states. In a practical sense, an actor's self-assigned membership in a sustainability working group may be an indication of their extra-role performance and stronger affective commitment to the group during the early stage of identification. It is also noteworthy that an actor's affective commitment to the group is strengthened by their interpretation of the group's higher status compared to other organizational groups (Ellemers et al., 1999).

Next, the dissertation will explore group-based emotions that form during the process of group identity creation since they are an important part of the unconscious and emotional dynamics of the X-system.

3.4 Group-based emotions and group identity creation

Group-based emotions are shared among members of a group, and this experience is grounded in their social affiliation with the group (E. R. Smith & Mackie, 2015). Individuals join social groups to experience a sense of belonging and togetherness. Despite individual differences in experienced emotions, social identification predicts the convergence of individuals' emotions towards group-based emotions within a group (Elfenbein, 2014; Mackie & Smith, 2017; Schoebi & Randall, 2015). Therefore, group membership can forecast emotional experiences even without direct interaction among group members (Mackie & Smith, 2017). The convergence of individual emotions is based on emotional contagion and self-stereotyping (Barsade, 2002; Elfenbein, 2014; Hareli & Rafaeli, 2008; Moons et al., 2009).

Moons et al. (2009) found that the mechanism of self-stereotyping ingroup emotions partially explains how group-based emotions are shared and can be influenced. According to the authors, identification moderates the convergence of group-based emotions within a group. The stronger the identification, the stronger the convergence of individual emotions towards the stereotyped group-based emotions. Furthermore, individuals who perceive the group as more central to their identity are more sensitive to manipulations of provided stereotypes related to the ingroup (Moons et al., 2009, pp. 766-767). These findings align with SCT (Abrams & Hogg, 1990; Ellemers et al., 1999; Moons et al., 2009; Turner et al., 1987).

The ingroup (we) and outgroup (they) phenomena and their dynamics are important in understanding group-based emotions, which are rooted in social categorization, group self-esteem and affective commitment to the group (Ellemers et al., 1999; Mackie & Smith, 2017). Individuals align their behavioural actions with the cultural assumptions of the organization, which are expressed through identity claims, defining the characteristics and boundaries of the group. Over time, this leads to the emergence of emotional stereotypes associated with certain groups (Ashforth & Mael, 1996; Mackie & Smith, 2017; Whetten, 2006a). Interestingly, negative organizational identity claims have been found to have a greater impact than positive ones on fostering identification with a group (Dobusch & Schoeneborn, 2015). Once the social identity of a group becomes meaningful to an individual, they begin to interpret organizational issues through the lens of that identity, and group-based emotions strongly influence their cognitive interpretations of these issues (Abrams & Hogg, 2017; E. R. Smith et al., 2007; E. R. Smith & Mackie, 2015). For instance, Huy (2011) observed that middle managers rejected strategic change initiatives due to triggered group-based emotions, even when their individual privileges were not threatened.

Interestingly, the emotional dynamics of intergroup interactions enable groups to regulate intragroup emotions through projective identification, splitting and

projection (Ashforth & Reingen, 2014; Mackie & Smith, 2017). The group's identity is shaped by various cognitive rules and unconscious subcultural assumptions, which in turn influence individuals' actions and decision-making processes (J. R. Smith & Terry, 2003; Weick, 1995). However, the complex cultural guidance of collective beliefs, assumptions, values and artefacts may exclude certain group-based emotions and their attributions (E. R. Smith & Mackie, 2015). For example, a group may have an identity associated with high achievement, which may discourage the expression of relaxation within the group, even if some members feel the need to express it. To gain a deeper understanding of group-based emotions and identification, the dissertation will now focus on the basic mechanisms of emotional activation, micro-level regulation and the process of emotional data sharing during social identification through emotional contagion.

3.4.1 Emotional activation and regulation

Emotions are triggered by discrete objects that can be found in the physical, social or mental world of individuals (Oatley, Keltner, & Jenkins, 2006). Emotions are closely connected to affect, such as feelings of relaxation or pleasantness, as well as affectivity, which is related to more enduring personal traits, such as an individual's tendency to form optimistic or negative assumptions (Barsade & Gibson, 2007; Russell & Barrett, 1999). Russell and Barrett (1999) pointed out that affect can serve as the "heart of any emotional episode", even in the absence of a specific object, becoming activated when something changes in the individual's environment (p. 806). According to the authors, emotional episodes are triggered when an event disrupts the affect, producing emotional and cognitive responses. However, emotions are relatively short-lived and expressed through bodily sensations (Fredrickson, 2001; Fredrickson et al., 2003; Fredrickson & Branigan, 2005). Additionally, sensing is an important physiological mechanism intertwined with the bodily movements of individuals as they engage in the recursive loop of seeking similarities, interpreting and acting (Barsade & Gibson, 2007; Beyes et al., 2022). Interestingly, immanent sensemaking is primarily based on the automatic emotional sensing of the environment through the body (Sandberg & Tsoukas, 2020).

Emotional sensing is based on the emotional data available in a particular situation (Dutton & Dukerich, 2006; Elfenbein, 2014; Maitlis et al., 2013). The emotional data influence individuals' strategic decisions and are automatically sensed through the sensory system, with emotional contagion serving as the underlying mechanism between individuals (Elfenbein, 2014; Hatfield, Cacioppo, & Rapson, 1993; Kudesia & Elfenbein, 2013). Emotional contagion is primarily facilitated through processes, such as mimicry, social comparison, emotional interpretation and empathy, which contribute to the emotional repertoire present in

a given situation (Barsade, 2002; Barsade & Gibson, 1998; Elfenbein, 2014; Hareli & Rafaeli, 2008). It is important to note that emotional contagion occurs through the interplay of cognitive C-systems and unconscious cognitive and emotional X-systems (Barsade, 2002; Elfenbein, 2014; Healey et al., 2015; Hodgkinson & Healey, 2011).

However, the distinct concepts related to emotional contagion often overlap during social identification, drawing upon frameworks, such as SCT and affective process theory (Abrams & Hogg, 2017; Alvesson et al., 2008; Ashforth et al., 2008; Elfenbein, 2014; Herrbach, 2006). The interplay of these concepts remains somewhat vague due to differences in research streams, conceptual confusion and a lack of novel methodologies in the study of organizational emotions and identification (Brundin et al., 2022). Moreover, the emotional repertoire present in a given situation can influence the quality of connections between individuals (Dutton & Dukerich, 2006). Additionally, despite the traditional dichotomy between negative and positive emotions, positive emotions can overlap with negative ones, contributing to processes such as creative change, particularly during moments of crisis (Bartunek et al., 2006; Elfenbein, 2014; Fredrickson et al., 2003).

Fredrickson and Branigan (2005) argued that positive emotions, despite being overlooked by organizational scholars, play a crucial role in the development of organizational resources over time. According to Fredrickson (2001), momentary experiences of positive emotions serve as indicators of the quality of connections between individuals as they facilitate the individuals' ability to flourish and expand their personal and social resources within organizations. Positive emotions broaden individuals' attention, loosen control mechanisms, encourage approach-oriented behaviour and sustain engagement in actions (Fredrickson et al., 2003; Fredrickson & Branigan, 2005; Rowe et al., 2007). Conversely, negative emotions tend to narrow individuals' attention and limit their thought-action repertoire in a given situation (Fredrickson & Branigan, 2005). The quality of interaction is influenced by the emotional repertoire present during the interaction, which is regulated through micro-level mechanisms, such as social comparison, emotional display with interpretations and empathy (Elfenbein, 2014).

Next, the dissertation will delve into the concept of emotional contagion as a micro-level emotional regulator to gain a deeper understanding of the processes of emotional and cognitive resonance seeking during social identification.

3.4.2 Emotional contagion and identification during group identity creation

Emotional contagion is a crucial process of emotional data sharing between actors (Elfenbein, 2014). According to Giorgi (2017), the process of identification leads to

emotional resonance, which occurs through emotional contagion. Therefore, emotional contagion is the primary mechanism of identification that fosters emotional resonance between the target of identification and the actors identified (Barsade & Gibson, 2007; Elfenbein, 2014; Herrbach, 2006). Scholars have endeavoured to understand the mechanisms of emotional contagion, such as how actors' emotions evoke emotions in others and how emotional data are transferred between actors, but they have yet to reach a consensus (Barsade, 2002; Brundin et al., 2022; Elfenbein, 2014; Hareli & Rafaeli, 2008). The lack of a unified approach and novel methods presents challenges for research on the dynamics of emotions in organizational settings, as previously mentioned (Brundin et al., 2022). Given the research scope and questions concerning group identity formation, the emotional contagion literature will be briefly reviewed to clarify the underlying mechanisms of emotional and cognitive resonance related to social identification (see Figure 1 and Figure 2).

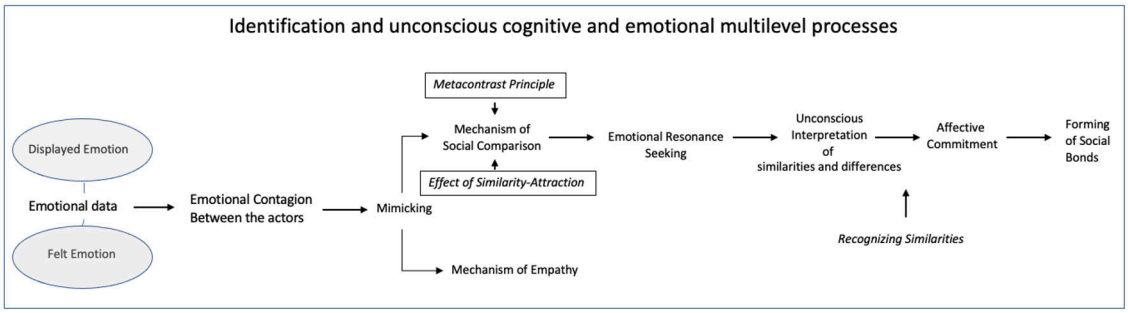

Figure 1. Identification from the perspective of unconscious cognitive and emotional processes in the early stages of group identity creation as a multilevel phenomenon. Modified from existing research.

Social comparison has been mentioned broadly in the emotional contagion literature as a basic mechanism of emotional contagion (Barsade, 2002; Elfenbein, 2007, 2014; Giorgi, 2017; Hareli & Rafaeli, 2008; Kouamé et al., 2022; Kudesia & Elfenbein, 2013). Of note is that SCT suggests that team members engage in social comparison, evaluating similarities and differences as they sense and reflect on the fit of their personal self within the social identity associated with the social group in a given situation (Abrams & Hogg, 1990; Ellemers et al., 1999; Tajfel & Turner, 1979; Turner et al., 1987). Therefore, social comparison perhaps encompasses both emotional and cognitive resonance-seeking behaviours. The term "behaviour" is used to refer to conscious cognitive behaviours as well as unconscious and emotionally driven behaviours, such as primitive mimicry, speech acts, facial expressions, vocalization or, more broadly, cognitively presented questions in a given context.

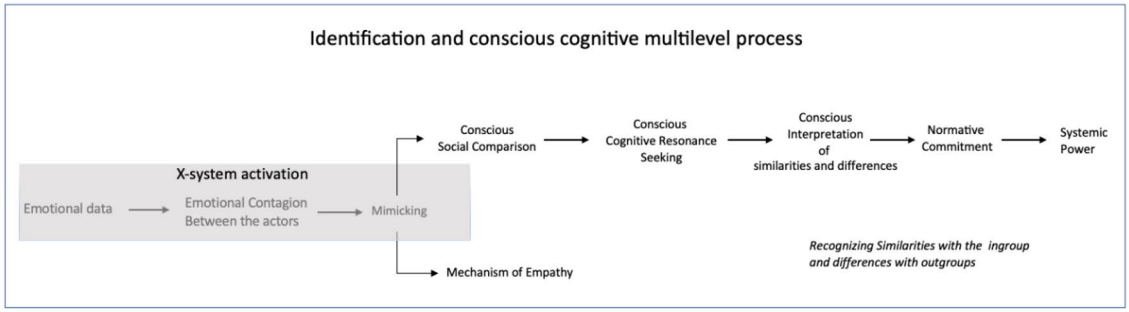

Figure 2. Identification from the perspective of conscious cognitive processes in the early stages of group identity creation as a multilevel phenomenon. Modified from existing research.

The aim of emotional and cognitive resonance seeking is to recognize similarities and differences related to mental models in cognitive C-systems and the processes of unconscious and emotional X-systems, following the effects of similarity attraction (Abrams & Hogg, 1990; Barsade et al., 2000; Giorgi, 2017; Healey et al., 2015; Hodgkinson & Healey, 2011). The similarity attraction effect is based on the value of reinforcement at the cognitive and emotional levels, leading to social coherence and improved cooperation (Barsade et al., 2000). It is well known that individuals try to bridge the gap between cognitive and experiential dissonance by seeking reinforcement of their feelings, attitudes or thoughts in relation to others and the world around them (Barsade et al., 2000; Hodgkinson & Healey, 2011). For example, Hodgkinson and Healey (2011) argued that reflexive socio-cognitive systems (X-systems), which are nonconscious and emotional, facilitate and hinder reflective socio-cognitive systems (C-systems) in decision-making. According to the authors, the experiential dissonance between the reflexive and reflective systems creates tensions that can occur at the individual or group level. Furthermore, these organizational tensions, between the reflexive (affective) and reflective (cognitive) processes, are manifested through the behavioural responses of individuals to certain strategic change initiatives. Additionally, the authors argued that behavioural responses, based on the organizational dynamic capabilities of sensing, seizing, and reconfiguring, contribute to the success of strategic change implementation (see also Teece, 2007). Therefore, cognitive, and emotional resonance seeking is driven by the need to reduce the dissonance between reflective and reflexive processes at the individual and group levels.

However, the mechanism of social comparison includes the interpretation of socially displayed emotion based on social appraisal theory and its suggestions regarding evoking cognitive appraisals. Social appraisal theory suggests that emotions evoke cognitive appraisals according to evaluative cultural scripts developed during previous life experiences and social learning (Kelly & Barsade, 2001; Lazarus, 1991). Interestingly, emotions can evoke emotions even without non-

verbal cues, relying on aesthetic symbols in the forms of textual words, visual signs or artefacts, which then lead to cognitive appraisals in a given situation (Elfenbein, 2014; Wasserman, Rafaeli, & Kluger, 2000). In addition, the interpretation of socially displayed emotion is influenced by the shared vantage point (SVP) and the narrative evoked by it (Elfenbein, 2014; Hareli & Rafaeli, 2008).

The shared vantage point is influenced by various factors, which can be classified as structural and motivational factors that affect the convergence or divergence of the shared vantage point of displayed emotion in a given situation (Elfenbein, 2014). Structural factors include, for example, membership in the same working group, the level of power distance or the amount of social coordination required in a job role (Elfenbein, 2014; Hareli & Rafaeli, 2008; Hatfield, Cacioppo, & Rapson, 1993). Motivational factors include, for example, group identification, liking or empathy mechanisms (Elfenbein, 2014; Hatfield, Cacioppo, & Rapson, 1993). The display rules of emotions also influence the interpretation of socially displayed emotions, and it is worth noting that during the formation of a working group, the group creates its own subcultural display rules through identity negotiation while establishing a group identity (Abrams & Hogg, 1990; Barsade & O'Neill, 2014; Gioia et al., 2010; Lazarus, 1991).

Primitive mimicry occurs unconsciously owing to our socio-emotional need for belonging to a group (Elfenbein, 2014; Hatfield, Cacioppo, & Rapson, 1993). It is based on the capability to primitively mimic facial expressions, vocalization and body expressions (Hatfield, Cacioppo, & Rapson, 1993). The observation of body movements activates certain emotions, which are recognized by the respondent to the emotion, who immediately and automatically strengthens or hinders the original emotion of the sender, leading to a withdrawal or approach in a given situation (Hatfield, Cacioppo, & Rapson, 1993).

Empathy is described as an action where the actor takes another actor's perspective, trying to get a sense of the other's inner world experiences (Barsade, 2002; Elfenbein, 2014; Hareli & Rafaeli, 2008; Hatfield, Cacioppo, & Rapson, 1993; Lazarus, 1991). Empathy is related to pro-social behaviour, interpersonal regulation of emotions and emotional labour, where the actor tries to influence others (Elfenbein, 2014). The mechanism of empathy is related to implicit emotional sharing in human systems (Kelly & Barsade, 2001). Interestingly, the mechanism of empathy leads to distance-taking, where the actor can distinguish between their own emotions and those of others by using emotional intelligence and detached-deliberate sensemaking (Kelly & Barsade, 2001; Sandberg & Tsoukas, 2020). This is line with Elfenbein's (2014) affective process theory, where the sensemaking is the tool for sensing emotional stimuli in situ. However, people transfer emotional data in social systems to satisfy their socio-emotional needs by synchronizing their interaction through body movements or the mechanism of transference (Kelly & Barsade, 2001).

Synchronization occurs in a cyclical manner through adjusting body movements in relation to others in a certain rhythm, which helps group members share certain group emotions (Kelly & Barsade, 2001). The sensemaking literature recognizes the importance of an adequate rhythm of sensemaking and sensegiving during interactions to create a shared sense of the situation that is based on emotional cues (Maitlis et al., 2013; Noë, A., 2015; Sandberg & Tsoukas, 2020; Weick et al., 2005; Weick, 1995). Thus, the synchronization of body movements and non-verbal interactions is an important part of the empathy mechanism, leading to emotional sensemaking (Kelly & Barsade, 2001; Maitlis, 2005; Maitlis et al., 2013). Transference is the mechanism whereby the actor unconsciously transfers emotions from their history, projecting them onto others as if the current situation/people/place were from their past. The actor who is the target of transference will instantly feel the emotions from the previous historical situation.

3.5 Organizational-level regulators of group identity creation, stakeholders and systemic power

Earlier, this dissertation discussed the theoretical understanding of group-level regulators in the establishment of a group identity. However, to fully comprehend the dynamics of group identity creation in practice, it is essential to adopt a more holistic approach that considers organizational-level regulators. Specifically, the dissertation will explore the role of organizational stakeholders as regulators of group identity and further examine the influence of systemic power within this context. Incorporating these perspectives will yield a deeper understanding of the complex interplay of different levels of regulation in shaping an organizational group identity. Stakeholders and previous social identities are primary resources of group identity creation.

Evidently, stakeholders play a crucial role in creating a social architecture around the forming working group. To obtain resources and legitimacy for their future actions, the forming working group must perform “emotional resonance work” with stakeholders (Kouamé et al., 2022; Scott & Lane, 2000; Turner, 2005). During this process, the group seeks emotional and cognitive resonance by making sense of stakeholders’ expectations and identity beliefs related to the forming group (Giorgi, 2017). Aligning the group’s emergent identity beliefs with those of stakeholders establishes emotional and cognitive resonance, fostering a sense of order (Giorgi, 2017; Maitlis, 2005). Stakeholders’ beliefs regarding the forming group are manifested through verbalized interpretations, storytelling, emotional reactions and responses from group members in the early stages of group formation (Corley & Gioia, 2004a; Fiol & Romanelli, 2012; Heaphy, 2017). According to the intergroup emotions theory, actors’ emotional reactions are activated by events affecting the

group with which they identify (E. R. Smith & Mackie, 2015). In the absence of a group identity in the early phase of grouping, actors often rely on their previous social identities as the basis for constructing the group identity (Gioia et al., 2010). Thus, the previous social identities of forming group members lay the foundation for their emotional reactions to stakeholders' expectations. However, the perceived interpretations of stakeholders' expectations regarding "who we are" and "how we should act" (i.e. ideal selves; see Wieland, 2010) serve as the primary resources and starting point for the group's identity negotiation (Alvesson et al., 2008). These interpretations shape the process through which the group negotiates and constructs its identity.

Identity negotiation within the group occurs through individuals who have previously identified with different social groups within the focal organization, such as units, teams, working groups or professional groups. A common definition of identification is that the actor will likely identify with a social group if the actor is able to feel similarity or alignment between their cognitive beliefs and the target of their identification (Albert et al., 1998; Kouamé et al., 2022; Kreiner & Ashforth, 2004). Individuals engage in identity work within the social environment to maintain and refine their self-worth, feelings of order and meaning and a positive sense of wholeness (Alvesson et al., 2008; Alvesson & Willmott, 2002; Pratt, 1998, 2003; Whetten & Godfrey, n.d.). The feeling of self-worth is derived from belonging to a certain social group through evaluative identification (Clarke et al., 2009; Ellemers et al., 1999). Evaluative identification is an ongoing process where individuals continuously shape and narrate their self-identities in relation to significant social groups to maintain a sense of self-worth (Alvesson & Willmott, 2002). The perceived lower social status of the group can negatively impact individuals' identification with the group as it may create temporary identity threats that weaken emotional bonds with the group (Branscombe, Nyla et al., 1999; Ravasi & Schultz, 2006; Somers, 2009). Therefore, the group members' earlier social identities serve as a secondary source for the group's identity negotiation during its early formation phase.

3.5.1 Systemic power as a regulator and outcome of group identity creation

Power is an important phenomenon to consider in relation to group identity formation as it affects the availability of resources, and this, in turn, sets boundaries for the relational dynamics and activities of the working group (Fleming & Spicer, 2014; Kaplan, 2011; Schildt, Mantere, & Cornelissen, 2020; Turner, 2005; Vaara & Whittle, 2022). Turner (2005) proposed a three-process theory regarding power, suggesting that power is produced during group formation and is closely related to identity questions within the group. The formation of a group identity leads to

changes in systemic power. According to Turner (2005), every actor within the group has the possibility to influence others, and their capabilities and access to resources define the form of power they can possess and wield.

Persuasive power is linked to an actor's social skills, emotional intelligence, and ability to negotiate with others regarding important questions of group existence, such as identity. It becomes particularly evident when group members disagree with each other. According to Turner (2005), persuasive power is a "function of group identity and consensus" (p. 10), indicating that every situation is evaluated in relation to the core defining attributes of the group, such as its norms or values. The term "persuasive" originates from SCT, where persuasive action refers to a group's collective attempt to develop a consensual response to a stimulus situation to sustain its actions (Turner, 2005).

Authority power is exercised when someone attempts to influence the direction of the group discussion by asserting their status or organizational norms in the discussion (Fleming & Spicer, 2014; Schildt, Mantere, & Cornelissen, 2020; Turner, 2005; Vaara & Whittle, 2022). When individuals with authority power exert their influence, they leverage their position, expertise, or formal authority within the organization to guide or control the group's activities and decision-making processes. This can be done by setting the agenda, making decisions, or enforcing certain norms or rules.

Coercive power, however, comes into play when conflicts arise within the group. It involves the use of force, threats, or punishment to compel others to comply with a particular viewpoint or course of action. The use of coercive power can lead to disidentification and personal rejection of the person exerting such power as it undermines trust and the sense of autonomy within the group (Fleming & Spicer, 2014; Turner, 2005).

According to Turner (2005), the group formation process reflects the group's identity formation process, and therefore he implicitly anchored the concept of the group formation process as a group identity formation process (p. 4). In other words, as the group comes together and interacts, its identity is shaped and negotiated through these interactions. Turner (2005) also highlighted the significance of power as a contextual element in the group formation process. Power dynamics play a crucial role in shaping the interactions and behaviours of group members, especially in the context of resource scarcity. When resources are scarce, individuals may engage in certain acts or behaviours to secure or protect their access to these resources. This can have implications for the dynamics within the group and the power relations among its members.

Furthermore, Turner (2005) suggested that resource scarcity is inherent to human life. Both socio-emotional and material resources are limited in various social interactions. For example, an individual may reject others' attempts to interact with

them, or they may display negative emotions despite the urgent need for others to feel safe or encouraged to continue their actions. These actions and behaviours influenced by resource scarcity affect the power dynamics within the group both at the conscious and unconscious levels of interaction.

However, in the early stages of group formation, the sustainability working group engages in collective identity work through collective sensemaking. The group seeks to frame its shared cognition and make sense of its environment and scarce resources. The environment includes internal and external stakeholders and their expectations, as well as the strategic objectives of the organization. However, the embeddedness of organizational identity in routines, practices, norms, power dynamics and emotions complicates the group's perception of the environment and its prospective sensemaking (Ravasi et al., 2020; Schildt, Mantere, & Cornelissen, 2020; Turner, 2005).

Organizational identity, as described by Sillince and Simpson (2010), is connected to the past and the present moment, requiring retrospective sensemaking from the actors involved. The perceived organizational identity is constructed through experiential learning and collective sensemaking, drawing on real experiences and historical narratives (Sandberg & Tsoukas, 2020; Stigliani & Ravasi, 2012). This experiential learning is deeply rooted in the practical world of the actors and contrasts with the organization's mere "image" management (Dutton & Dukerich, 1991; Gherardi, 2001; Golden-Biddle, 2020). POS has been found to enhance affective commitment, extra-role activities and organizational identification (Eisenberger et al., 2001; Rhoades et al., 2001). Then, we might expect real face-to-face interactions with stakeholders to gradually strengthen the affective commitment and identification of the stakeholders regarding the developing identity of the forming group. The actors perceive this strengthening relationship as support for the forming group, and this manifests through resource allocation activities. This is in line with Bartel et al.'s (2012) research on virtual work and identification, which indicates that physical isolation has negative effects on organizational identification, which are mediated by the perceived respect of the actors. These findings suggest that the real face-to-face interactions with stakeholders play a crucial role in strengthening affective commitment, identification and perceived support for the forming working group.

Overall, the early phase of group formation involves collective identity work through collective sensemaking, drawing on experiential learning and historical narratives. The relationships and interactions with organizational stakeholders shape the affective commitment, identification, and perceived support for the developing group. Next, this dissertation will focus on contextual factors influencing the formation of a sustainability working group identity to offer a broader understanding of the practical world of sustainability working groups.

4 Sustainability strategy implementation and sensemaking

A sustainability strategy implementation can be viewed as an incremental process of change requiring the ongoing reorganization of both the social systems within and outside the organization to achieve a more balanced position within the overall organizational system (Aguinis & Glavas, 2013; Battisti et al., 2022; Weick, 1995). Consequently, the emergence of formal and informal organizational structures, such as the formation of social power structures and norms at the organizational level, is a gradual and emergent process that necessitates timely managerial sensegiving and action to enhance synchronization with the sensemaking needs of participants (du Gay, 2020; Schildt, Mantere, & Cornelissen, 2020; Weick et al., 2005). Managerial sensegiving aims to guide actors' activities by promoting strategic micro-practices on a daily basis (Rouleau, 2005) in alignment with the organization's strategic initiatives (Gioia & Chittipeddi, 1991; Kroon & Reif, 2021). Moreover, a sustainability transition is a strategic decision; as such, managerial sensegiving should address the temporary sensemaking needs of employees, which often involve conflicting economic, environmental and social organizational concerns (Aguinis & Glavas, 2013; Gioia & Chittipeddi, 1991).

However, it is crucial to acknowledge that the transformation of socio-material systems is dependent on social organizing, which is influenced by the social system's history and organizational dynamics (Orlikowski, 2000; Weick et al., 2005). Social organizing progressively generates new organizational beliefs that shape actors' activities and behaviours in a given context (Ahrne et al., 2015; Dutton & Dukerich, 1991; Golden-Biddle, 2020; Locke & Golden-Biddle, 1997; Maitlis & Christianson, 2014). Organizational routines and habitual behaviours are intertwined with systemic power, which has gained scholarly attention in recent years (Orlikowski, 1992, 2000; Weick et al., 2005). For instance, Schildt, Mantere, and Cornelissen (2020) recognized the hidden form of episodic power and the taken-for-granted form of systemic power that impacts collective sensemaking processes. Additionally, Vaara and Whittle (2022) draw attention to the effects of power in discursive sensemaking, which can produce common sense, non-sense or new sense. However, there is high tension in a sustainability transformation due to conflicting stakeholder

interests (Argento et al., 2022; Battisti et al., 2022; Corazza et al., 2017; Haffar & Searcy, 2019; Scott & Lane, 2000). Therefore, power in sensemaking is a relevant focus of this study, which will be further explored in relation to sensemaking types (Orlikowski, 1992, 2000; Weick et al., 2005).

Interestingly, the back-and-forth movement between sensegiving and sensemaking, and its synchronization within a specific socio-material environment, serves as an underlying mechanism for creating shared understanding among social actors and guiding their organizing practices (Beyes et al., 2022; Gioia & Chittipeddi, 1991; Sandberg & Tsoukas, 2011, 2020; Weick, 1995). This process occurs at both the intragroup level, among group members, and the intergroup level, between the group and its stakeholders. It is important to recognize that inward sensemaking takes place among group members, while outward sensemaking occurs between the group and its stakeholders, regardless of the stakeholders' primary social structure. Stakeholders can be individual professionals representing issues, other groups related to the group or even organizations with specific expectations of the group (Scott & Lane, 2000). The back-and-forth movement of sensegiving and sensemaking is driven by the actors' cognitive and emotional resonance seeking, as mentioned earlier, to fulfil their socio-emotional needs (Giorgi, 2017; Kouamé et al., 2022). Weick et al. (2005) described sensemaking as a mechanism for creating plausible identity stories that connect actors to the practical world through the dualistic movement of sensing and acting.

The feeling of plausibility is embedded in the emotional and unconscious levels of action, where emotional resonance seeking aims to sustain routine activities even in the face of cognitive breakdowns (Giorgi, 2017; Healey et al., 2015; Sandberg & Tsoukas, 2020). Cognitive resonance seeking leads to the crafting of shared mental models through collective discourse, which then facilitates the development of conceptual sense and the emergence of issue labelling among the actors (Giorgi, 2017; Sandberg & Tsoukas, 2020). The alignment of cognitive mental models with emotional and unconscious processes strengthens the commitment to further sensemaking and micro-practices with the aim of influencing actors' environments to achieve a better systemic fit (Giorgi, 2017; Healey et al., 2015; Heaphy, 2017; Herrbach, 2006; Hodgkinson & Healey, 2011; Kahn, 1990; Kahn et al., 2018; Orlikowski, 2000).

4.1 Making sense of the contextual factors of the sustainability working group identity creation

The group's identity formation work is accomplished through altering the outward and inward collective sensemaking (see Figure 43 and Table 1), which involves the group's contextual processes, such as stakeholders' expectations, managerial sensegiving and the exercise of power (Corley & Gioia, 2004a; Gioia et al., 2010; Gioia & Chittipeddi, 1991; Huy, 2011; Meyer & Allen, 1991; Sandberg & Tsoukas, 2015; Turner, 2005).

The external environment and its logic of practice, which focus the group's outward collective sensemaking, involve intertwined reflexive cognitive and reflective affective processes (Healey et al., 2015; Sandberg & Tsoukas, 2011). Inward collective sensemaking is influenced by the simultaneous processes of group identity creation and identification among group members. Identification involves emotional attachment (i.e. affective commitment) and fosters a sense of unity with the object of identification (Bergami & Bagozzi, 2000; Healey et al., 2015; Van Der Vegt & Bunderson, 2005). It is noteworthy that the group members have already identified with multiple social identities prior to joining the sustainability working group (Foreman & Whetten, 2002).

Institutional and situational power are present in sensemaking situations, guiding the attention and actions of actors within a specific context. This power can manifest through resource allocation and the willingness to utilize capabilities, such as sensing, seizing or reconfiguration (Hodgkinson & Sadler-Smith, 2018; Schildt, Mantere, & Cornelissen, 2020). Whetten (2006) observed that organizational identity is shaped by the past decision-making history and organizing activities, which significantly influence individuals' and groups' sensemaking processes through legitimized power structures and the logic of actions (Bacharach et al., 1996; Ravasi & Schultz, 2006). It is worth noting that a forming group lacks a shared history, which poses a challenge to its collective sensemaking (Gioia et al., 2010). Additionally, According to Turner's (2005) processual power model, persuasive and authoritative power strongly influence the early stages of group identity creation. Furthermore, institutional power structures play a role in safeguarding current resource allocation and shaping the structure of the organizational social architecture and behavioural norms as the group identity formation progresses (Whetten, 2006a).

4.1.1 Outward collective sensemaking

Outward sensemaking is a critical mechanism for creating sufficient differences that distinguish the ingroup from outgroups (Foreman & Whetten, 2002; Gioia et al., 2010). However, the group must also establish enough similarities to sustain resonance within its systemic whole (Ashforth et al., 2008; Foreman & Whetten, 2002; Gioia et al., 2010).

For example, Rerup et al. (2022) found that adaptive sensemaking played a central role in perceiving the expectations of organizational stakeholders both internally and externally, leading to the development of organizational identity alignment and distinctive characteristics compared to other organizational actors. The authors also found that professional identity work was interconnected with identity work at the organizational level, thereby enhancing scholars' understanding of identity as a multi-level and integrative concept. Consequently, we can anticipate group-level sensemaking and identity construction to align with the sensing of external stakeholders' expectations.

However, this research focuses on the perceived expectations of group members indirectly through their cognitive speech acts and emotional displays during normative discussions regarding the group's identity creation in its early phases.

According to Dutton & Dukerich, (1991) organizational members engage in collective sensemaking to create an "external construed image" of themselves, which represents their temporary beliefs regarding the opinions and evaluations of significant internal or external stakeholders. Additionally, the group's behaviour during its formation is influenced by temporary issues that may be perceived as more or less significant (Dutton & Dukerich, 1991). It is important to note that these group issues accumulate historically and impact the iterative processes of outward–inward sensemaking, where interpretations are continuously revised (Maitlis, 2005; Sandberg & Tsoukas, 2020; Weick, 1993). The collective interpretations of the sustainability working group guide the group's attention and resource allocation during its formation. However, organizational social systems and their architecture represent the group's sensemaking configuration, which reflects the multiple expectations of the embryonic working group's stakeholders (Gioia et al., 2010; Sandberg & Tsoukas, 2011, 2020). The sensemaking configuration is an important contextual element that provides outward sensemaking cues for the group's identity formation, specifically influencing its values and core existential mission (Corley & Gioia, 2004a; Gioia et al., 2010; Kouamé et al., 2022; Rerup et al., 2022).

According to the pioneering work of organizational identity scholar Stuart Albert (1998), the movement from oneself towards "outward attachment" is a prerequisite for an actor's identification. Therefore, the issues held within an actor's self-identity must first be reached through an outward movement. This metaphor of identity work as an inward–outward movement between the self and the external world clarifies the relational and distinctive nature of the concept of identity (Gioia, 1998).

However, the external environment presents a paradoxical task for the group. The sustainability working group faces a paradox between perceiving similarities and differences with its stakeholders (Gioia et al., 2010). To survive, the forming working group needs external resources and thus must find sufficient similarities to create emotional and cognitive resonance with its stakeholders and obtain legitimization from them to act (Giorgi, 2017; Turner, 2005). Similarities connect the group to its stakeholders through intertwined conscious cognitive and emotional and unconscious systems resonance mechanisms (reflexive X-system and reflective C-system), fostering bonding among the actors (Barsade, 2002; Giorgi, 2017; Kouamé & Liu, 2021). Yet the group must also establish itself as distinctive enough to be recognized as a separate entity among other environmental actors (Whetten, 2006a; Whetten & Mackey, 2002). However, we can expect that the sensemaking configuration (i.e. stakeholders' expectations) will not directly influence the group

formation process, as the phenomenon of grouping has shown certain similarities regardless of the context (Gersick & Hackman, 1990).

Nevertheless, the organizational social system and its architecture (e.g. working groups and their relations) are explicit products of strategic resource allocation, which often involves conflicting interests. This creates organizational tensions between and within social groups of actors. The conflict among actors' interests can challenge the overall sense of justice, in special, if the actors' temporal horizon is too narrow (Monin et al., 2013). However, the interpretations and activities (including displayed emotions, cognitive discourse and actions in the material world) that occur within interactions within the group influence the processes of inward interpretative sensemaking within the group (Hay et al., 2021; Oliver, 2015; Sandberg & Tsoukas, 2011; Weick, 1995). The absence of a shared history poses a challenge for inward collective sensemaking in a newly established working group. This raises the question of what sources contribute to the group's early phase of identity formation.

Interestingly, members of the embryonic group draw upon their values and identity beliefs from their previous organizational social identities while creating a new working group through their liminal identities (Dick, 2005; Fiol & Romanelli, 2012). In other words, as the developing group forms, its members construct the working group's identity on the basis of their prior social commitments and identifications related to their primary social identities (Fiol & Romanelli, 2012; Gioia et al., 2010; Meyer & Allen, 1991). It is worth noting that the actors' previous social commitments and identifications may be associated with various sources, such as unions, professions, or other significant focal points, and they all play a relevant role in the group's identity negotiations, further influencing the organization of issues related to the group's identity development.

However, Ashforth and Reingen (2014) observed that actors manage organizational tensions (i.e. conflicts of interest) through intra- and intergroup processes by splitting and projecting difficult issues onto other groups to maintain their cognitive beliefs. According to them, this mechanism releases intragroup and organizational tensions, creating space for individuals to strengthen their identification with their primary social group. Additionally, Kahn et al. (2018) noted that social processes affect organizational resilience through intergroup dynamics. They emphasized the importance of understanding inner organizational dynamics and recognizing three different pathways through which organizations face adversities, such as operational breakdowns. Social infrastructures managing intra- and intergroup dynamics influence whether actors are willing to turn towards a focal organization, identify with it and offer resources, or set boundaries and withdraw from cooperation during the green transition (Ashforth & Reingen, 2014; Jarzabkowski, 2003; Lawrence & Phillips, 2019).

Importantly, the conflict of actors' interests challenges the overall sense of justice, especially if the actors' temporal horizon is too narrow (Monin et al., 2013). Strong time pressure that actors experience while defining their group's values and core mission may lead to an oversimplified and narrow self-definition of the group (Dutton et al., 1994). Therefore, the managerial framing of time related to the working group's existence and task execution is relevant to the emergence of inner tensions during the early phases of grouping.

4.1.2 Inward collective sensemaking

Inward collective sensemaking is related to ingroup relations and their cognitive, emotional, and unconscious dynamics during group formation. These phenomena shape the internal dynamical environment of the group. If an actor cannot maintain their self-defining cognitive beliefs, they must engage in identity work through sensemaking to align their social identity with the changed interpretation related to their identification target. According to Pratt (1998), sensemaking is necessary to interpret cues for one's identity work, making it a primary tool for this identity work. However, discrepancies in meaning between group members are the main triggers of collective sensemaking due to perceived and unresolved identity threats at both the individual and group levels (Hay et al., 2021). Identity threats are associated with unmet socio-emotional needs that affect affective commitment to the group (Herrbach, 2006; Turner, 2005).

Interestingly, collective sensemaking serves as a tool for sensing emotional and cognitive resonance with the environment during the identity development of a sustainability working group (Cornelissen & Werner, 2014; Giorgi, 2017; Hay et al., 2021; Heaphy, 2017; Kouamé et al., 2022; Sandberg & Tsoukas, 2011, 2015, 2020). As mentioned previously, Sandberg and Tsoukas (2020) identified four different sensemaking types, with immanent sensemaking as the primary type involving sensing emotional resonance with the environment in the present moment. These sensemaking types relate to different time orientations and align well with the research objective of revealing the group formation process from a holistic social-symbolic perspective of organizational identity formation as a strategic practice (Lawrence & Phillips, 2019). It is worth noting that identification requires both outward and inward sensing and acting (Albert et al., 1998; Hay et al., 2021; Maitlis, 2005; Weick, 1995). The group constructs its identity in relation to the environment and aims to achieve cognitive alignment and emotional resonance with significant stakeholders (Giorgi, 2017; Kouamé & Liu, 2021). However, the direction of collective sensemaking during group formation is likely to vary at different stages.

According to Sandberg and Tsoukas (2020), sensemaking research has overlooked unconscious and emotional sensemaking processes by overemphasizing retrospective cognitive sensemaking. Unconscious sensemaking processes involve the procedural

and perceived dynamics of power and related resource scarcity, along with emotional responses (Maitlis et al., 2013; Sandberg & Tsoukas, 2020; Schildt, Mantere, & Cornelissen, 2020). Fortunately, the organizational identity literature has recognized the importance of sensemaking in relation to actors' and groups' identification (Gioia et al., 2010; Oliver, 2015; Pratt, 2003; Weick, 1995). However, this research aims to shed light on unconscious and emotional collective sensemaking in relation to cognitive conscious collective sensemaking to uncover the micro-level pattern of the early phase of group identity formation. By clarifying the interplay of conscious cognitive and unconscious and emotional processes, we may gain new knowledge of collective emotional and cognitive resonance-seeking behaviour regarding resource scarcity at the group level during group identity formation (Healey et al., 2015; Sandberg & Tsoukas, 2011; Turner, 2005). To clarify the differences between conscious cognitive and unconscious and emotional processes, I will look at them in more details.

4.1.3 Unconscious cognitive and emotional X-system processes and conscious cognitive C-system processes in collective sensemaking

Healey et al. (2015) argued that the shared cognition of a group operates through two distinct but simultaneously operating cognitive processes: reflexive unconscious and emotional X-system processes and reflective conscious C-system processes. The authors examined the interactive mechanisms of X-system processes and C-system mental models at the group level, drawing on dual-systems theory and its parallel-comparative stream. They suggested that despite the occurrence of conscious cognitive disagreements among the group members, connection can be maintained through shared cognition at the unconscious and emotional level if their X-systems (i.e. unconscious, and emotional processes) are sufficiently similar. Furthermore, they suggested that similarity with the group members C-systems might explain their ability to maintain connection despite of their X-systems` differences. Maintaining this connection is crucial for successful interaction and cooperation as it facilitates the development of a common logic of practice among the group members (Healey et al., 2015; Hodgkinson & Healey, 2011; Sandberg & Tsoukas, 2011; Vaisey, 2009).

Importantly, this research is grounded in the theoretical assumption that the actors forming the sustainability working group seek continuous resonance with their organizational environment. Additionally, if they perceive similarities in their X-systems and/or C-systems, they can establish connections with specific stakeholders and develop social exchange relationships with them (Giorgi, 2017; Healey et al., 2015; Kouamé et al., 2022). However, encountering differences helps to clarify the evolving boundaries of the group's identity (Gioia et al., 2010). To understand how the actors engage in crafting different X- and C-systems with each other and with

significant stakeholders at the group level, one must examine the mechanisms of identification within the group formation.

According to Giorgi (2017), identification is a key mechanism for experiencing emotional resonance and achieving a sense of coherence among actors in relation to the organizational audience – that is, its stakeholders. Kouamé et al. (2022), suggested that the absence of emotional resonance can result in disengagement among stakeholders who form the organizational audience for managerial framing. Therefore, the actors in the sustainability working group must establish emotional resonance with their stakeholders to secure the necessary resources and legitimacy to act. However, the stakeholders' identification with the sustainability working group is contingent upon the "social-symbolic work" performed by the actors (Lawrence & Phillips, 2019). Social-symbolic work refers to the process by which actors develop and integrate current work processes within evolving social systems while actively constructing meanings in collaboration with stakeholders (Golden-Biddle, 2020; Lawrence & Phillips, 2019; Sandberg & Tsoukas, 2011, 2015, 2015; Weick, 1995).

The actors of the working group engage in establishing the group's identity by defining its boundaries in relation to the social environment, processes, and structures. To successfully form their identity, the actors must involve stakeholders in a co-creative process to establish their presence and relevance among other entities (Kouamé & Liu, 2021). However, organizational identity can be seen as a collectively framed construction through which actors make sense of the world (Weick, 1995). Despite being a collective endeavour, organizational identity has an objective nature that is not solely dependent on individual actors' interpretations (Dutton et al., 1994; Dutton & Dukerich, 1991; Scott & Lane, 2000). Nevertheless, the micro-level mechanisms of identity construction in a working group remain unclear as previous research on cognitive identity construction has primarily focused on the organizational level (Clark et al., 2010; Gioia et al., 2010; He & Brown, 2013).

Considering the latest findings of sensemaking theory, perhaps the objective nature of identity is related to actors' ability to sense the collective emotional and unconscious processes of organizing in relation to the environment, which maintain and restore organizational issues without much cognitive effort from the actors (Albert, 1998; Pratt, 1998; Sandberg & Tsoukas, 2011, 2015, 2020; Scott & Lane, 2000; Weick, 1995; Whetten, 2006). In addition, Healey et al.'s (2015) findings concerning the group's unconscious and emotional X-processes, and the discovered capability to maintain connections despite the actors' conflicted mental models implicitly refers to the actors' immanent and involved-deliberate sensemaking processes (Sandberg & Tsoukas, 2011, 2015, 2020). Further, when adding organizational identity scholars' notions regarding the descriptions of "sensemaking as a tool" for identification, perhaps to understand the mechanism of micro-level identity creation, it is essential to consider the relevance of sensemaking literature in

parallel with the organizational identification (OID) literature and its findings. The OID literature includes the concepts of identity work, commitment, and identification, which are the basic concepts related to emotional and cognitive resonance seeking through collective sensemaking during group formation.

Table 1. The contextual factors of collective sensemaking during the working group identity creation.

	Outward Collective Sensemaking	**Inward Collective Sensemaking**
Cognitive Factors (C-system)	Organizational "hot" or "cool" issues (Dutton & Dukerich, 1994)	Social identities and their discrepancies – commitments and identification (Dick, 2005)
	Social infrastructure around the working group (Ashfort & Reingen, 2014; Monin et al., 2013)	Values of the actors (Albert, 1998; Heaphy, 2017; Meyer & Allen, 1991)
	Stakeholders' expectations (i.e. sensegiving configuration) – similarities and differences (Gioia et al., 2010)	Perceived time pressure (Dutton, 1994)
	Perceived organizational support (Rhoades, 2001)	Perceived identity threats as an outcome of unmet socio-emotional needs (Hay, 2021)
	Organizational values (Heaphy, 2017)	Professional goals of the actors
	Managerial legitimation (Ahrne & Brunsson, 2011; Turner, 2005)	
	The interpreted level of group self-esteem (Branscombe et al., 1999)	The interpreted level of group self-esteem (Branscombe et al., 1999)
Emotional and Unconscious Factors (X-system)	Expressed and felt emotions (Hayley, 2015; Heaphy, 2017)	Expressed and felt emotions (Hayley, 2015; Heaphy, 2017)
	Emotional resonance seeking (behavioural) (Healey et al., 2015)	Emotional resonance seeking (behavioural) (Healey et al., 2015)
	Authority power: capacity to get people to act by appealing to group norms, values or someone's authority (Schildt, Mantere, & Cornelissen, 2020; Turner, 2005)	Persuasive power: situational based on interaction and negotiation (Schildt, Mantere, & Cornelissen, 2020; Turner, 2005)
	Felt obligation towards the organization (Eisenberger et al., 2001)	Felt obligation towards the organization (Eisenberger et al., 2001)
	Coercive power against others' willingness or abilities: institutional, like legislation or organizational rules (Schildt, Mantere, & Cornelissen, 2020; Turner, 2005)	Authority power: capacity to get people to act by appealing to group norms, values or someone's authority (Schildt, Mantere, & Cornelissen, 2020; Turner, 2005)
	Emotional authenticity (Huy, 2011)	Emotional authenticity (Huy, 2011)
	Actors' feelings and distance related to the organizational values (Meyer & Allen, 1991; Pratt, 1998)	Actors' feelings and distance related to the organizational values (Meyer & Allen, 1991; Pratt, 1998)
	Feelings of strengthening oneness with the target of identification (Ashforth & Mael, 1989;Kreiner & Ashforth, 2004; Rousseau, 1998)	Feelings of strengthening oneness with the target of identification (Ashforth & Mael, 1989; Kreiner & Ashforth, 2004; Rousseau, 1998)

Next, the theoretical findings from sensemaking theory and organizational identity literature will be integrated to propose a theoretical framework for group identity creation. This framework will serve as a basis for further empirical investigation and verification.

5 The model of working group identity creation

On the basis of the theoretical discussions above on SCT, organizational identity theory and sensemaking theory, a modified model of working group identity creation is proposed. This model builds upon our previous model on group identity creation during collective sensemaking and incorporates additional insights to enhance our understanding of the dynamics involved in the process of group identity creation (Kuusisto & Mäkinen, 2023) .

The modified model consists of the following components:

1. Actors' socio-emotional needs act as a driver of group identity creation behaviour (Abrams & Hogg, 1990, 2017; Ashforth et al., 2008; Turner, 2005).

2. Actors seek emotional and unconscious cognitive resonance with group members (X-system). The model acknowledges that individuals seek emotional and cognitive resonance with other group members to establish a sense of shared understanding, emotional connection and cohesion within the group (Elfenbein, 2014; Giorgi, 2017; Healey et al., 2015; Hodgkinson & Healey, 2011; Kelly & Barsade, 2001; Kouamé et al., 2022).

3. Actors seek explicit similarities and differences with stakeholders (C-systems). Individuals also make comparisons and categorizations, seeking explicit similarities and differences with stakeholders. This process helps in shaping their perception of group boundaries and clarifies the group's identity in relation to external actors (Abrams & Hogg, 1990; Elfenbein, 2014; Healey et al., 2015; Kelly & Barsade, 2001; Kouamé et al., 2022). Affective commitment develops with similarities, while distance grows with perceived differences. As individuals identify similarities with other group members, their affective commitment to the group strengthens (Bergami & Bagozzi, 2000; Elfenbein, 2014; Herrbach, 2006; Mercurio, 2015; Somers, 2009). Conversely, perceived differences from stakeholders can create distance and potentially weaken commitment (Kouamé et al., 2022). Actors bond with each

other and an embryonic group identity emerges (Giorgi, 2017; Meyer & Parfyonova, 2010; Van Der Vegt & Bunderson, 2005). Through social interactions and shared experiences, actors develop bonds and a sense of belonging to the group. This contributes to the emergence of an embryonic group identity, which is still in the early stages of formation.

4. Actors face resource scarcity and establish preliminary norms related to resource allocation (Clarke et al., 2009; Turner, 2005). The model acknowledges the presence of resource scarcity, which shapes the group dynamics. Actors collaboratively develop preliminary norms and rules concerning resource allocation and utilization (Tajfel & Turner, 1979; Turner et al., 1987; Willer et al., 1989). Normative pre-commitment begins to develop, and the basic task(s), mission and rules of the group emerge (Meyer & Allen, 1997; Meyer et al., 2002; Meyer & Allen, 1991; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010). As the group progresses, normative pre-commitment develops, and a clearer understanding of the group's mission and basic rules emerges. This guides the group's behaviour and decision-making processes (Meyer & Parfyonova, 2010).

5. Felt emotions and unconscious cognitive appraisals emerge in situ. Emotions and unconscious cognitive appraisals play a significant role in shaping individuals' experiences within the group (Elfenbein, 2007, 2014; Healey et al., 2015). These appraisals and emotions are influenced by the situational context and interactions with other group members.

6. Persuasive and authoritative power is produced by displaying emotion and engaging in cognitive speech acts (Barsade, 2002; Elfenbein, 2014; Hatfield, Cacioppo, & Rapson, 1993). The model recognizes that individuals can exert persuasive and authoritative power within the group by displaying emotions and performing cognitive speech acts. These acts influence others and shape the group's dynamics.

7. The group members sense persuasive and authority power (Turner, 2005). Group members perceive and interpret the persuasive and authority power displayed by others, and this perception influences their attitudes, behaviours, and interactions within the group.

8. Systemic power is sensed as a group property that defines its boundaries and raises existential questions within the environment (Turner, 2005). The model acknowledges the sense of systemic power that is experienced as a group property defining its boundaries and its relevance and impact in the broader environment.

Through these components, the modified model provides a theoretical framework that captures the key processes and dynamics involved in group identity creation (Kuusisto & Mäkinen, 2023). It highlights the interplay of emotional and unconscious cognitive, and conscious cognitive, processes during group identity creation. Next, the dissertation will present a more nuanced description of the modified theoretical model of group identity formation, presented in Figure 3.

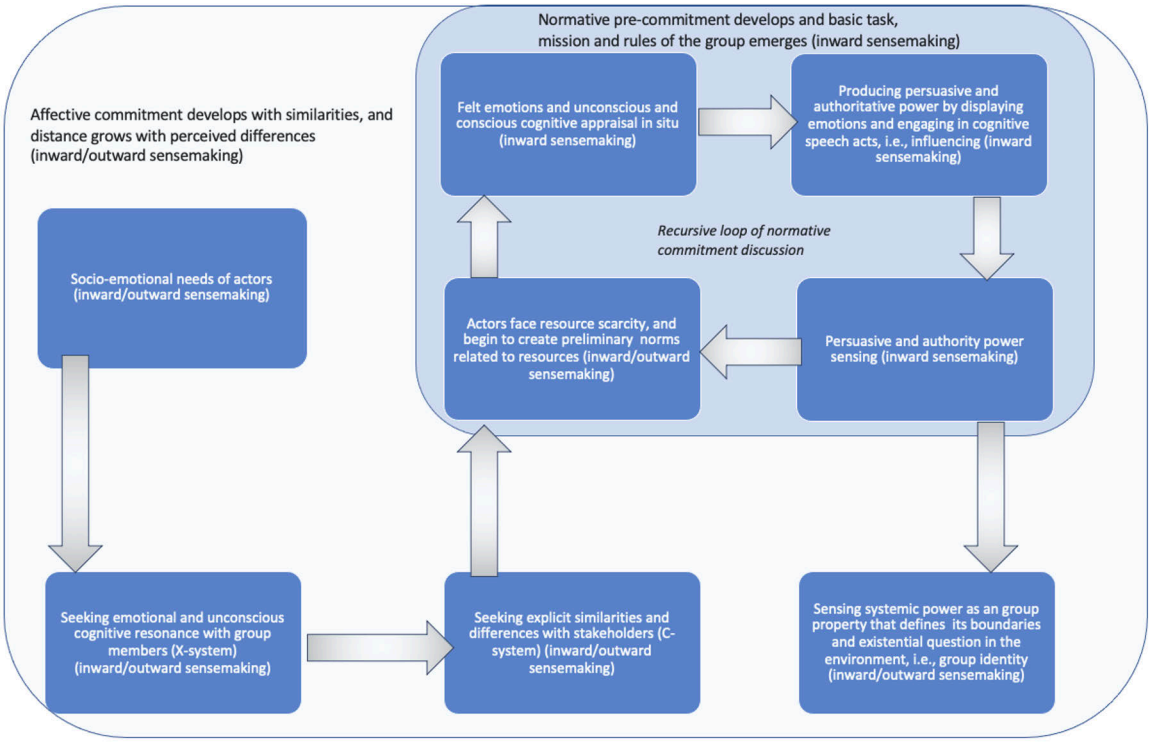

Figure 3. Collective sensemaking of group identity creation. Modified from Kuusisto & Mäkinen (2023).

In the very early stage of group identity creation, the lack of a group identity creates a void due to the missing sense of meaning. Therefore, the previous social identities of group members and the expectations of stakeholders serve as main sources of intra- and outgroup regulators in the group identity creation process during this initial phase (Clark et al., 2010; Gioia et al., 2010; Wieland, 2010). These previous social identities refer to the roles, affiliations and group memberships that individuals had prior to joining the forming group (Corley & Gioia, 2004a; Gioia et al., 2010). Moreover, the expectations of stakeholders, such as leaders, supervisors, and external entities, contribute to the regulation of group identity. These

expectations can influence how individuals perceive and interpret the group's identity, norms and values (Giorgi, 2017). By aligning their behaviour and self-perception with stakeholders' expectations, individuals seek to gain legitimacy, support and resources for the forming group (Kouamé et al., 2022; Scott & Lane, 2000).

Rather than undertaking a more nuanced examination of group identity regulators, the dissertation will focus on the intragroup dynamics during group identity creation. However, the effects of these regulators, such as stakeholders and external factors, may be indirectly observed through the behavioural acts of group members during the process of group identity creation (Brundin et al., 2022; Brundin & Melin, 2006). Interestingly, in the early stages of group identity creation, the socio-emotional needs of actors serve as the main driver of social identity related to group membership (Abrams & Hogg, 1990; Ashforth et al., 2008; Turner, 2005). While the effects of external regulators may come into play later in the process, during the initial stage, it is the individuals' socio-emotional needs that primarily guide their engagement and identification with the group (Abrams & Hogg, 1990; Albert et al., 1998; Ashforth & Mael, 1996; Turner, 2005). Thus, the contextual external regulators of the group do not determine the dynamics of early-stage group identity creation. Instead, the socio-emotional needs of individuals override those external factors. Socio-emotional needs provide the impetus for individuals to seek connection, acceptance and a sense of identity within the forming group (Kahn, 1990; Turner, 2005; Turner et al., 1987).

However, the socio-emotional needs of actors drive their social identification and thus serve as the fundamental drivers of social identity (Abrams & Hogg, 1990; Ashforth et al., 2008; Turner, 2005). These needs encompass various aspects, such as the needs for belonging, affiliation, self-esteem, and self-worth. The effect of similarity-attraction leads to a search for similarities and differences among group members and with outgroup stakeholders during social categorization (Elfenbein, 2014; Kelly & Barsade, 2001). However, the metacontrast principle influences group members to minimize differences within the ingroup and accentuate differences with the outgroup, which facilitates clarifying the boundaries of the forming group but can also lead to growing tension in relation to perceived outgroups (Abrams & Hogg, 1990).

Affective commitment develops towards perceived similarities, for example, related to values, attitudes, behavioural acts, cognitive mental models or beliefs (Barsade et al., 2000; Elfenbein, 2014). Group members are seeking similarities at the unconscious cognitive and emotional levels and at the conscious cognitive level (Giorgi, 2017; Healey et al., 2015). Emotions play a significant role in this process, as they are targeted in the search for similarities and differences at the emotional

level (X-system) of identification. Emotional data, including both felt and displayed emotions, then become the focus of comparison and evaluation.

Emotional contagion is a primary mechanism through which emotions are shared among group members (Elfenbein, 2014; Kudesia & Elfenbein, 2013). It occurs through primitive mimicry, which leads to a mechanism of social comparison following SCT (Elfenbein, 2014; Hatfield, Cacioppo, & Rapson, 1993). This process involves the transfer of emotions between individuals, leading to a shared emotional experience. Primitive mimicry, a reflexive and automatic bodily reaction in the form of facial expressions, vocalizations or body movements, is a key element of emotional contagion (Beyes et al., 2022; Brundin et al., 2022; Elfenbein, 2014; Kelly & Barsade, 2001). It operates as an oscillating loop between the emotional respondent and sender, facilitating the settlement of emotions and the establishment of interaction channels.

Social comparison, as proposed by SCT, involves individuals comparing themselves to others within their social group (Elfenbein, 2014; Hatfield, Cacioppo, & Rapson, 1993). This process allows individuals to determine their level of similarity to or difference from others in the group, contributing to the formation of social identity.

The mechanism of social comparison is driven by the effect of similarity-attraction and the metacontrast principle, leading actors to seek emotional resonance through sensing similarities and differences (Abrams & Hogg, 1990, 2017; Elfenbein, 2014; Kouamé et al., 2022; Sandberg & Tsoukas, 2020). During this process, interpretations occur unconsciously at the X-level of identification, guided by emotional appraisals based on emotional cues in the situational context (Giorgi, 2017; Healey et al., 2015; Hodgkinson & Healey, 2011; Maitlis et al., 2013). When actors recognize similarities, this likely leads to the development of emotional resonance, thereby strengthening affective commitment (Elfenbein, 2014; Giorgi, 2017). This, in turn, facilitates the forming of social bonds between actors who perceive these similarities. As social bonds are established, interactional channels open, allowing for the development of normative commitment (Meyer et al., 2002; Somers, 2009).

Mimicry leads to two parallel processes – the unconscious and emotional process and the conscious cognitive process of social comparison – which eventually intertwine. The cognitive social comparison process involves seeking cognitive resonance, which relates to the actors' mental models and cognitive beliefs (Elfenbein, 2014; Giorgi, 2017; Kelly & Barsade, 2001; Kouamé et al., 2022). Interpretation occurs through cognitive sensemaking, where actors engage in discursive interactions to make sense of and interpret the emerging beliefs about the group's basic task(s) and mission and stakeholders' expectations (Gioia et al., 2010; Giorgi, 2017; Sandberg & Tsoukas, 2011, 2020). The group's basic mission and

tasks require resources, which are limited in the practical world of actors (Battisti et al., 2022). Therefore, the discourse related to the cognitive interpretation of similarities and differences develops in relation to the perceived scarcity of organizational resources and the perceived gap between resource availability and stakeholders' expectations of the forming group (Turner, 2005). This discourse is shaped by the actors' understanding of the resource constraints and their efforts to align their cognitive beliefs and mental models with the resource-related demands of the group.

As the process of identity negotiation unfolds, normative pre-commitment development occurs, whereby the actors internalize the emerging norms and rules of the group in relation to resource allocation and utilization (Abrams & Hogg, 2017; Gioia et al., 2010). Through this internalization process, the actors begin to establish a shared understanding of the norms and rules that guide their resource-related behaviours within the group (Turner, 2005). This normative commitment serves as a basis for coordinating resource use and aligning the group's actions with its emerging identity and stakeholder expectations.

Normative pre-commitment evokes felt emotions and cognitive appraisals, which then influence actors' behaviours through cognitive speech acts and displayed emotions, ultimately impacting the group dynamics. This social influencing process results in the manifestation of persuasive and authoritative power, which the group members sense (Turner, 2005). This iterative cycle of normative commitment and social influencing continues as the group progresses in its identity creation process (Turner, 2005). Through ongoing interactions and exchanges, the group members refine their shared norms and rules, further strengthening their commitment to the group's identity (Meyer & Allen, 1997; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010). This iterative process allows the group to gain clarity about its basic mission and existential questions.

6 Research design and methodology

This research is a qualitative single case study using focused ethnography based on an abductive research logic where micro-level activities and practices are central, with limited cultural context, to gain an in-depth insight into group identity creation (Pink & Morgan, 2013; Sormani, 2023). While the literature on sensemaking and social identity is extensive, the underlying mechanism of group identity creation has received limited attention from scholars (Abrams & Hogg, 2017; Alvesson et al., 2008; Ashforth et al., 2008; Cristofaro, 2021; Gioia et al., 2010; He & Brown, 2013; Sandberg & Tsoukas, 2015, 2020; Spears, 2021). A single case study was chosen to test existing theoretical relationships and uncover new ones through a detailed and comprehensive examination (Gehman et al., 2018). Furthermore, the limited understanding of the dynamics of group identity creation and its various sub-sequences supports the use of a single case study to provide a rich and nuanced description of current sustainability management needs and future research directions (Spears, 2021).

The extensive literature on organisational sensemaking, social identity and identification provided a foundation for developing a theoretical pre-model of group identity, which was then identified and refined through processual research (Gehman et al., 2018; Reichertz, 2023). The aim of this research design and the chosen methodology was to adopt a critical pragmatic perspective that balances the often overly idealistic sustainability discourse with an understanding of actors' practical daily lives during the formation of working groups (Aguinis & Glavas, 2019; Kramer & Pfitzer, 2016). The objective of the research was to uncover the intricate interplay between conscious cognitive processes, unconscious cognitive processes, and emotional processes in the early stages of group identity creation. This holistic approach was chosen due to the lack of empirical research that comprehensively examines these interconnected aspects of group identity formation (Healey et al., 2015; Sandberg & Tsoukas, 2020).

This research originated from a pragmatic problem related to the management and formation of sustainability working groups, aiming to explore how these groups navigate the challenges of limited resources and existential questions (i.e. group identity) during their initial stages as an organisational phenomenon. The problem

was identified through discussions with sustainability managers in Finnish multinational companies that were tasked with establishing working groups to implement sustainability strategies between 2021 and 2022. During these discussions, it became apparent that the organisational reward systems were primarily focused on economic profitability, limiting the recognition and support for the broader scope of sustainability pillars (ecological, economic and social) and impeding individuals' ability to find intrinsic motivation and meaning in their sustainability work within the organisational context (Aguinis & Glavas, 2019). Additionally, the lack of tools for effectively managing the establishment of sustainability working groups posed challenges for the successful implementation of sustainability strategies (Aguinis & Glavas, 2013, 2019; Arjaliès & Bansal, 2018; Glavas, 2016; Slawinski & Bansal, 2012). Recognising the need to uncover the underlying dynamics at play, an abductive research logic was adopted by the researchers (Douven & Igor, 2011; Dubois & Gadde, 2002; Golden-Biddle, 2020; Locke & Golden-Biddle, 1997; Reichertz, 2023).

Abductive research logic embraces questioning and typically starts with a moment of surprise that challenges our previous beliefs and ends with assumptions to be tested and filled with inductive research logic focusing on practice (Golden-Biddle, 2020; Reichertz, 2023). My moment of surprise was the realisation that many organisations lacked pathways and models for establishing sustainability working groups. In addition, there was a lack of empirically tested theoretical models for setting up sustainability working groups in the literature. I searched the literature on collective sensemaking, social identification and organisational identity (Alvesson et al., 2008; Ashforth et al., 2008; Brown et al., 2015; Cristofaro, 2021; De Luca Picione & Valsiner, 2017; He & Brown, 2013; Kohtamäki et al., 2022; Maitlis et al., 2013; Pratt, 2003; Ravasi et al., 2020; Sandberg & Tsoukas, 2011, 2015, 2020; Tajfel & Turner, 1979). The theoretical search revealed that the problems of forming sustainability working groups seemed to be related to their highly tensioned and complex nature and to the old challenges of resource allocation (Battisti et al., 2022). In parallel with a theoretical literature review, I began to develop new assumptions about the early stages of group identity formation (Gehman et al., 2018; Langley, 2007; Langley et al., 2013; Reichertz, 2023). The challenges of lacking group identity were realised, and I could not find answers regarding how the actors simultaneously made sense of and crafted their social identity and the group identity in the highly tensioned environment of sustainability transition (Ashforth et al., 2008; Gioia, 1998; Gioia et al., 2010).

As described earlier, the sociomaterial approach at the intersection of sensemaking and group identity creation is still a relatively unexplored area, which justifies the parallel, yet intertwined use of deductive and inductive approaches (Eisenhardt et al., 2016; Gehman et al., 2018; Graebner et al., 2012; Leonardi, 2013;

Pettigrew, 1997). The sociomaterial approach allows for the examination of social dynamics and organising within their material context under the framework of "practical rationality" (Sandberg & Tsoukas, 2011). Taking a critical realism stance in sociomateriality allows us to analyse structure (e.g. group identity process) as a separate constituent from actors' actions (i.e. socially constructed through subjective experienced agency), while recognising that embodied actions or inactivity bring structure alive (Gherardi, 2001, 2017; Leonardi, 2013).

However, the use of focused ethnographic methods combined with abductive reasoning logic may provide new insights into collective sensemaking during working group creation (Eisenhardt et al., 2016; Knoblauch et al., 2023; Langley, 1999). In addition, focused ethnographic research strategy allows for methodological flexibility and the use of intuition in the field, while also making the use of different surveys or technological measurement devices available (Eisenhardt et al., 2016; Gehman et al., 2018; Graebner et al., 2012; Knoblauch et al., 2023; Langley, 1999). The focus of group identity creation empirical research is presented next to create a more nuanced picture of the research design and methodology.

6.1 Focus of the group identity creation empirical research

Intra-organisational efforts to provide strategic sense related to the sustainability management are usually carried out by middle managers and the sustainability team, which can be composed of sustainability managers or experts who participate on a voluntary basis. The working group dedicated to sustainability can help alleviate resistance to organisational change by supporting sensegiving efforts related to sustainability during the sustainability management. In this research, the focus is on observing the activities and emotional responses of the actors as they attempt to understand sustainability issues within the organisation and create the emerging identity of the sustainability working group following focused ethnographic methodologies (Gehman et al., 2018; Gherardi, 2023; Gherardi & Laasch, 2022; Knoblauch et al., 2023; Maitlis, 2005; Maitlis et al., 2013; Pink & Morgan, 2013; Sandberg & Tsoukas, 2011, 2020). The emotional responses demonstrated by the actors create embodied reactions within the group, which can be seen as a group-level activities in relate to group identity creation (Abdallah, 2011; Brundin et al., 2022; Langley & Turner, 2005).

Unconscious and emotional controlling mechanisms may be manifested through group members' non-verbal communication, such as silence in response to a joyful suggestion or adjusting one's body position in relation to the speaking person (Gylfe et al., 2016). These unconscious and emotional controlling mechanisms interact with the conscious cognitive identity negotiating process. However, reflexive emotional

controlling mechanisms interact with reflective cognitive identity negotiating processes. Therefore, this research aims to discover the interplay between reflexive emotional and unconscious (i.e. X-system) and reflective cognitive processes (i.e. C-system) of group identity formation by taking a critical realism perspective on the group identity creation (Ackroyd & Fleetwood, 2005; Healey et al., 2015; Hodgkinson & Sadler-Smith, 2018).

Gioia et al. (2010) argued that the internal and external factors of forming organisations affect the multilevel identity process during the formation of a new college. The authors applied both a social constructivist and a social actor view while examining the formation of organisational identity. According to the authors, the social constructivist view is important in answering the question, "Who are we as an organisation?" (p. 4), while the social actor view is necessary to establish actorhood in a social space during group formation in relation to the actors' evolving identity beliefs and to answer the question, "What are the stakeholders expecting from us?". Although the level of analysis is different in this research, I follow the ideas of Gioia et al. (2010) by taking an integrative approach where the social constructivist view is dominant in answering the question, "Who are we as a working group?" while the social actor view is dominant in answering the question, "What are the stakeholders expecting from us?"

In this research, Langley's (2007) perspective on strategy as practice is adopted, which emphasises a detailed description of activities and a focus on micro-level activities and practices. Langley et al. (2013) also called for more process-oriented research at the individual level of analysis, with a focus on "key actors" (p. 10). Langley (1999) highlighted the possibility that "relatively small numbers of simple deterministic elements may generate complexity" (p. 1998) and thus succeed in explaining the logic of processual complex phenomena. Sustainability transition management presents a complex challenge in which participants' sensemaking and behavioural acting in situ are intertwined with the emotional controlling mechanisms of the group.

People express their emotions and cultural beliefs during dialogical interaction in sensemaking forums (i.e. social interaction forums). However, there might be concerns related to self-presentation in the group context, specifically related to the organisational role system and its hierarchy. Video-recorded data allows the researcher to capture facial, vocal and verbal data at the same time with body movements and gestures enabling the capture of evidence of the decoding of non-verbal emotional displays during the strategic interaction of the group, such as head nods, tone of voice, smiling and intensity of body movement (Gylfe et al., 2016; Knoblauch et al., 2023; Knoblauch & Tuma, 2023; Kouamé & Liu, 2021). Thus, the focus is not on the felt emotions of the actors but on the strengthening and weakening embodied cues related to positive or negative emotions during the evolving group-

level sensemaking in forming patterns and phases of the group identity creation process (Gonzaga et al., 2001). In addition, the focus is not on intra-individual phenomena but on the group-level phenomena created by participants in situ (Smith & Mackie, 2015).

This research attempts to discover the embodied regulative interaction pattern related to the pattern of displayed cognitive, unconscious, and emotional interaction during the initial state of group identity creation. In addition, it extends our findings to different sensemaking types according to Sandberg and Tsoukas' (2020) types to discover the dynamics/pattern of collective sensemaking during group identity creation. It is noticeable that there is an inner dialogical interaction between the actors' own sensemaking and acting out while they are making sense of identity creation issues (Elfenbein, 2007). However, sensemaking forums represent sociomaterial and ethnographic places where the interaction and interpretations of the participants occurs (Leonardi, 2013; Pink & Morgan, 2013). In this research, these collective sensemaking forums and ethnographic places are presented in Figure 4 .

Participant observation based on focused ethnography is used, as mentioned above, in formal meetings co-created with the researcher(s) and the steering group of each case (Gehman et al., 2018). Participant observation is complemented by focus group interviews to gain a better understanding of the dynamics of collective sensemaking during the process of group identity creation (Brundin et al., 2022; Farnsworth & Boon, 2010; Gylfe et al., 2016; Kouamé & Liu, 2021). After the observation, a focus group interview was conducted by asking participants to reflect on certain discussion topics and their own sensemaking processes using the basic sensemaking question: What was going on? (Sandberg & Tsoukas, 2011; Weick et al., 2005; Weick, 1995). Participants reflected on their group identity creation process as a structure and structuring object produced by their own activities driven by agency and individual sociomaterial needs (Sandberg & Tsoukas, 2020; Turner, 2005; Yakhlef & Essén, 2013).

Focus group interviews were chosen because group identity creation and collective sensemaking are group-level phenomena, which fits well with the ongoing phenomenon and critical realism stance of this research (Ackroyd & Fleetwood, 2005; Barbour, 2023). Farnsworth and Boon (2010) argued that focus group interviews intrinsically involve group dynamics and thus require attention to this aspect, even though the research project's targets may be outside this phenomenon due to the relational dynamics of the group during the focus group interviews. Group interaction produces data that follow the temporary logic of group dynamics, reflecting the power and emotional dynamics of the group in situ (Farnsworth & Boon, 2010).

Parker and Tritter (2006) pointed out the differences between group interviews and focus group interviews by emphasising the peripheral position of the researcher in relation to the group. The authors underlined that during the group interview, the researcher is centre stage, asking questions and regulating group dynamics, hindering interaction between the members and thus mimicking the dynamic of individual interviewing. During focus group interviews, the researcher acts more like a facilitator or moderator, encouraging interaction between group members. However, focus group interviews are an appropriate method for discovering group dynamics phenomena, as in this research. In addition, the research will also use the "zooming-with" technique to involve key actors in reflecting on their feelings and inner speech in a particular interaction situation by utilising recorded video clips, following Langley et al.'s (2013) concept related to "key actors".

To identify and further elaborate on the phases of the proposed theoretical model of group identity creation, I will use critical discursive analysis to identify speech acts and non-linguistic elements associated with different phases, such as the embodied discussion of stakeholder expectations (Alvesson & Kärreman, 2000). Discourse analysis here pays attention to micro-level social interaction practicalities in their context, such as displayed emotions, meaning making and dynamics of power, following Turner's (2005) three-phased model of power to obtain a better understanding of how power is enacted during group identity creation. The first-order codes of discursive analysis are based on different phases of the proposed model, and the second-order codes emerge from the data following an inductive logic of reasoning (Alvesson & Kärreman, 2000; Eisenhardt, 1989; Eisenhardt et al., 2016; Gehman et al., 2018; Langley, 1999, 2007; Langley & Abdallah, 2011). As suggested by sensemaking theory, different types of sensemaking reflect an actor's sensemaking and meaning making in a specific situation (Alvesson & Kärreman, 2000; Sandberg & Tsoukas, 2020). Therefore, I will pay special attention to the temporality of speech, whether it is retrospective, present or prospective, and the relational direction of speech, whether outward or inward, during collective sensemaking in the process of group identity creation (Dutton & Dukerich, 2006; Gherardi, 2023).

Furthermore, I will measure the level of affective and normative commitment to verify its progression during group identity creation, utilising the well-documented survey of workplace commitment developed by Meyer and Herscovitch (2001), in which affective, normative and continuous commitment are measured as "a sense of being bound to a course of action" (p. 319) before and after the group meetings presented in Figure 4. This methodological choice is in line with Smith and Mackie's (2015) recommendations for following the processual development of group-based emotions through pre- and post-surveying. Group-based emotions are developed as an outcome of group identity creation, which occurs through affective and normative

commitment development, according to self-categorisation theory (Abrams & Hogg, 2017; Bergami & Bagozzi, 2000; Elfenbein, 2014; Herrbach, 2006; Knight et al., 2018; Mercurio, 2015; Meyer et al., 2002; Rhoades et al., 2001; Somers, 2009; Turner et al., 1987).

To ensure the rigour of the analysis, the researcher(s) engaged in regular discussions with the steering group to ensure that the emerging themes and categories were consistent with the observed phenomena and to identify any potential biases in the analysis process (Eisenhardt et al., 2016; Gehman et al., 2018). The analysis was also subjected to peer review by other researchers in the field to ensure the validity and reliability of the findings (Cornish et al., 2023). Conducting collaborative analysis with other researchers improves critical thinking and provides other perspectives (Cornish et al., 2023). The ontological questions, case description and detailed description of the empirical setting are further clarified in the following sections, followed by details of the data collection and analysis processes.

6.2 Ontological questions of collective sensemaking and group identity creation

Sandberg and Tsoukas (2020) discussed ontological questions of sensemaking through four different constitutional ontological categories that are strongly related to actors' engagement in collective sensemaking: being-in-the-world, temporality, embodiment, and language. The concept of being-in-the-world is based on the view that we are always entwined with the whole systemic world through our relationships and that we are ready for certain action possibilities. We are not separate entities but interconnected with our sociomaterial environment; thus, a relational approach to actors is important in sensemaking and group identity research (Abrams & Hogg, 2017; Alvesson et al., 2008; Dutton & Dukerich, 2006; Gioia et al., 2010; Langley et al., 2013; Leonardi, 2013; Pink & Morgan, 2013; Sandberg & Tsoukas, 2011, 2020).

Temporality is related to three different time concepts: practical, chronological and existential time (Alvesson & Kärreman, 2000; Sandberg & Tsoukas, 2020). For example, existential time assembles actors' experiences of the past, present, and future simultaneously (Sandberg & Tsoukas, 2020, p. 6). Actors sense these three different time dimensions simultaneously and can make "sensing" and cognitive reflections simultaneously, yet from different existential time perspectives. However, it is essential to recognise which time dimension is present in an actor's mind while making sense, as it affects the interpretation of empirical evidence during data analysis.

The third ontological concept, embodiment, consists of the habitual and expressive sides of the bodily constituted world (Cunliffe & Coupland, 2012; Gylfe

et al., 2016; Leonardi, 2013; Orlikowski, 2000; Sandberg & Tsoukas, 2011). Motor intentionality is related to mental intentionality, and actors are connected to the sociomaterial world through body movements and senses, which are affected by moods and emotions (Yakhlef & Essén, 2013). Merleau-Ponty's concept of "body schema" serves as a foundation for both sides (Sandberg & Tsoukas, 2020, p. 6). The habitual side is constructed from previous body schemas, while the expressive side acts in the present moment through "constant adjustment to the particularities" (Dreyfus, 2014, p.81).

Language emphasises how we are related to the practical world's "performative-representational nexus of language" (Sandberg & Tsoukas, 2020, p. 8). It is noticeable that the same language content might produce very different contextual meanings; hence, it is important to understand the context of sensemaking situations during the empirical data analysis of discourse (Alvesson & Kärreman, 2000; Sandberg & Tsoukas, 2020). For example, in the absorbed coping situation, when the actor is trying to continue their action under the well-known schema, the language is used in a performative way because it does not include reflection, such as "I am trying to solve this problem at the moment by twisting my hand like that". Absorbed coping means that the actor is so deeply engaged in the present situation that they are not able to reflect on actions or their surroundings (Sandberg & Tsoukas, 2020; Weick, 1995). The abstract detachment mode of engagement produces representational use of language, such as "I was trying to solve the problem by twisting my hand like that". When language is used in a performative way, the actor is engaged in the present moment and the world of practice, trying to make sense of changing schema and developing contextual sense (Sandberg & Tsoukas, 2020). In contrast, the representational use of language is related to the actor's aim to create and strengthen a conceptual sense related to the situation (Sandberg & Tsoukas, 2020).

Ontological questions are important in sensemaking and group identity creation because they relate to the fundamental nature of reality and the different ways that individuals and groups understand and interact with that reality (Leonardi, 2013; Sandberg & Tsoukas, 2015, 2020). In group identity creation, individuals and groups make sense of the world around them through their own subjective experiences and interpretations by utilising intra-individual and collective sensemaking (Abrams & Hogg, 2017; Maitlis, 2005; Sandberg & Tsoukas, 2011, 2020; Tajfel & Turner, 1979; Van Der Vegt & Bunderson, 2005; Weick et al., 2005; Weick, 1995).

By understanding and addressing ontological questions in sensemaking research, we can gain a deeper understanding of how individuals and groups create meaning and how they understand and interact with the world around them during group identity creation (Aguinis & Glavas, 2019; Brown et al., 2015; Cristofaro, 2021; Maitlis, 2005; Sandberg & Tsoukas, 2015, 2020). Additionally, by noticing

ontological assumptions in sensemaking research, we can reveal hidden biases or assumptions that may influence the way that individuals and groups interpret and understand the world around them (Alvesson & Kärreman, 2000; Healey et al., 2015; Hodgkinson & Healey, 2011; Sandberg & Tsoukas, 2015, 2020). Sensemaking types help us recognise ontological questions during the data analysis process; for example, we might detect the different qualities of power by detecting the type of sensemaking during the group discussion (Sandberg & Tsoukas, 2020; Schildt et al., 2020; Turner, 2005).

6.3 General case description

This single case study focuses on a medium-sized multinational Finnish digital company that was founded in 2009. The company has experienced rapid growth and is currently privately held but is preparing to enter the stock market. In October 2022, the researchers were asked to help establish a sustainability working group. One member of the board contacted the principal researcher and provided background information related to the company's sustainability management history over the phone. However, this information was deemed irrelevant for the purpose of group identity creation. Therefore, the boundaries of the research data analysis were set from the first meeting with the sustainability working group and maintained until the last meeting.

After two distance meetings and negotiations with the steering group of research, the researchers agreed to begin a focused ethnographic project to assist with the initial formation of the working group (Farnsworth & Boon, 2010; Parker & Tritter, 2006; Pink & Morgan, 2013; Sormani, 2023). The company expected the researchers to facilitate the creation of a sustainability working group and to support the implementation of their strategy in practice. This was the first working group in the company's history focused on sustainability. The principal researcher suggested a structure for conducting focused ethnographic research based on her previous experiences facilitating working groups. She recommended using a collaboration platform ("Mural") to support the process during the research project. The working group continued after the focused ethnographic interventions, so the process continued even after the research project ended. The principal researcher sent an information letter to the participants through the chief operating officer, in which the details of the research project's practicalities and formalities were described.

The sustainability working group consisted of ten members from different hierarchical levels (three levels) of the case company. The steering group of research (SGR) project consisted of five people: the chief executive officer (CEO), chief operating officer (COO), and chief people officer (CPO), along with two researchers. The personnel committee of the company consulted with top management on the

development of sustainability issues. The member of the board who contacted the principal researcher was responsible for sustainability issues in the committee. The steering group set targets for the project and scheduled action points for spring 2023 in October 2022. The COO took on the role of sustainability working group leader and began planning the establishment of the working group and the details related to invitations and member recruitment. The COO suggested that membership in the working group be based on volunteerism, and the CEO and CPO agreed.

The COO published an invitation to apply for the sustainability working group in late November 2022 and chose members by embracing diversity. The members of the working group were informed of their membership via email at the same time as they were informed of the research project. The members of the group had not met face-to-face before the first planned workshop for the research project (Figure 4), and they were not familiar with each other. Some had worked together on previous projects, but the COVID-19 pandemic and distance working caused feelings of unfamiliarity within the group.

The top management team (TMT) set preliminary targets for the working group to finalise their sustainability strategy by utilising a kick-off event that was scheduled for spring 2022 with all personnel of the company. During this kick-off, the personnel were asked to work with the company's values and create sustainability initiatives based on them. The CEO embraced personnel involvement and strongly supported sustainability strategy creation during the steering group's first meeting. However, he did not have any thoughts related to practical issues of management, such as financial or compensatory issues of sustainability implementation management. According to the CEO, the level of social sustainability was relatively high in the company because of its competitive value, but the researcher noticed that his social sustainability view was narrow, mainly focusing on personnel benefits, such as job time stretching and health care services.

In early January 2023, the COO briefed the starting working group via email. She presented the main targets of the sustainability working group and the timetable for face-to-face meetings during the spring but did not provide any details related to the group's working process in her email. The main targets of the group were to 1) create a sustainability roadmap for the company, including budgeting suggestions, and 2) define what sustainability meant for the company. It is worth noting that the company's customers had already begun asking about sustainability issues, and some had requested descriptions of the company's sustainability policy, according to the CEO. He mentioned that the company had to prepare to tighten its environmental policies and regulations in response to changes in European Union regulations, such as the ESG taxonomy.

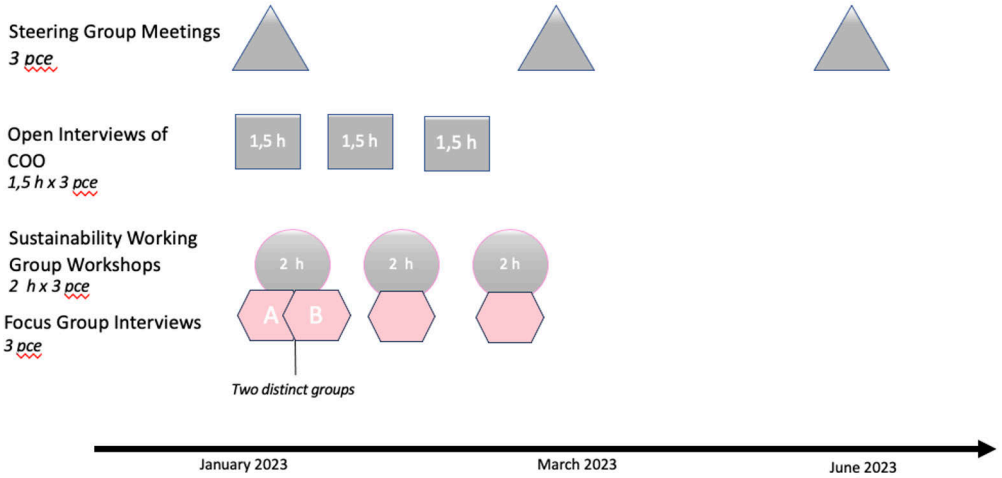

Figure 4. Structure of research interventions in case company.

Next, I will present the ethnographic places (i.e. the workshops of the Sustainability Working Group), data gathering and analysis processes in use. I will then briefly present some thoughts on data analysis.

6.4 Ethnographic places, data gathering process and the analysis

The data gathering process began at ethnographic places (i.e. workshops) in January 2023, when the researchers entered the field (Pink & Morgan, 2013). The concept of ethnographic place emphasises the importance of contextuality in data collection during focused ethnography. Contextuality refers not only to material places but also to social relationships between actors that are constructed in a certain sociomaterial environment, producing social identity creation as a process (Kärreman & Alvesson, 2001; Leonardi, 2013; Pink & Morgan, 2013; Sormani, 2023). Interestingly, the forming group and its emerging group identity is a sociomaterial ethnographic place that can be experienced through its emotional and unconscious processes (Ajzen, 2011; Healey et al., 2015; Leonardi, 2013; Pink & Morgan, 2013). The data gathering process occurred as an iterative cycle in which the researchers involved members of the forming group to reflect on the collected data as a form of thematic focus group interviews (Parker & Tritter, 2006). The data gathering process began earlier, in October 2022, as described in the previous chapter (General case description). The focus of focused ethnography was selected based on the proposed model's assumptions related to the early stage of group identity development.

In this research, the researchers met with the COO a few days before the sustainability working group's first workshop in January 2023. The aim of this

meeting was to interview the COO as the sustainability working group leader and collect data related to her expectations and beliefs regarding the start of the group identity creation process. The individual interview lasted 90 minutes, and two researchers were present, making field notes. The researchers chose not to use video recording due to the asymmetric interaction situation and the potential for reduced feelings of safety, which could have hindered self-presentation in situ. During the open interview, the researchers encouraged the COO to act according to her role as a group leader and prepared her to take on her responsibilities, despite the researchers' participatory observation and focus group interviewing during the forthcoming workshops. Additional interviews were arranged during the research process, as described in more detail in the chapter on the interviews of key informants.

The workshops were structured to serve as a space for facilitating the sustainability working group's efforts related to the company's sustainability strategy, as well as for participatory observation, during which focus group interviews were arranged. All workshops were video recorded. Surveys of commitment were conducted during the two workshops as pre- and post-surveying. The researchers decided not to use a survey in the first workshop to avoid additional sensitising to the research setting. They also wanted to avoid disrupting group dynamics at the beginning. The principal researcher believed that integrating participatory observation and focus group interviews in a facilitative workshop could provide valuable insight into the process of group identity creation and collective sensemaking dynamics (Farnsworth & Boon, 2010; Pink & Morgan, 2013).

By conducting focus group interviews during the workshops, the researchers could ask participants to reflect on their experiences and share their perspectives on collective sensemaking during group identity creation (Cornish et al., 2023; Kärreman & Alvesson, 2001). The researchers were prepared to adapt their approach based on the participants' needs and were flexible in their research design.

6.4.1 The workshops as arenas for group identity creation

The first workshop of the sustainability working group was held in January 2023, with ten participants from three different hierarchical organisational levels. The size of the focus group was appropriate and fit within the range of 8–12 participants to ensure diversity and optimal space for discussion (Stewart et al., 2023a). The workshop lasted two hours, and the participants were not completely familiar with each other. Hence, the interaction of forming the sustainability working group was not based on taken-for-granted patterns, making the setting suitable for both group dynamics research and the use of focus group techniques in it (Parker & Tritter, 2006). The workshop was the first face-to-face meeting of the group and was held in

the company's head office in a meeting room. The COO was asked to present her thoughts related to sustainability strategy creation and to set targets for the sustainability working group's work.

The role of the researchers was clarified during the first workshop, and the focus of the empirical research was presented to the participants. The participant observation and co-working model related to the workshops were clarified once again, reiterating what had been presented beforehand in the informational letters sent to the participants. The roles of the researchers were clarified many times during the workshop, whenever the group showed signs of hesitation. The group showed signs of hesitating a few times during the first workshop, such as asking aloud, "Is it okay if we do it like this?" or "How much time do we have left?" The researchers interpreted these signs as a normal group phenomenon related to developing group norms (Abrams & Hogg, 2017; Smith & Terry, 2003). The researchers made field notes and briefly reflected on them immediately after the workshop, avoiding post hoc analyses and following the principles of collaborative analysis (Cornish et al., 2023).

The researchers clarified their role beforehand so that the principal researcher was the main facilitator of the group members' interactions, and the senior researcher made field notes observing these interactions (Farnsworth & Boon, 2010). The principal researcher and senior researcher held brief discussions during the workshop and adjusted the facilitating process according to their observations (Pink & Morgan, 2013; Sormani, 2023). During the first workshop, adjustments were made related to the time limits of certain group tasks, and the group was divided into two small groups during focus group interviews in the first workshop to create a feeling of safety and encourage self-presentational issues (Brundin et al., 2022; Edmondson, 1999, 2011; Guest et al., 2023).

The manuscript of the workshop followed the structure presented here:

1. Introduction, role clarification and structure of the workshop.

2. Facilitated discussion related to the definition of sustainability: The principal researcher asked group members to clarify and write down what was meant by sustainability in the company's context, based on pre-materials and their common knowledge.

3. Facilitated discussion and decision task related to the change initiatives produced in the company's sustainability kick-off situation in April 2022: The principal researcher asked group members to reflect on the previous discussion related to the group's main mission and tasks and make decisions about initiatives included in the sustainability strategy of the company. The

sustainability initiatives were sent as pre-material for participants, and they were asked to familiarise themselves with them.

4. Focus group interview with the whole group and a short reflection of the discussion: The principal researcher asked group members to discuss the question, "What happened during the group discussion in the group and between the members or related to other actors or material space in situ?"

5. Focus group interviews with divided groups and short reflection on group discussion in two research groups, facilitated by the researchers: The principal researcher asked the group members to discuss the question, "What happened during the group discussion in the group and between the members or related to other actors or material space in situ?"

6. COO presentation related to sustainability strategy creation and the purpose of the sustainability working group.

7. Group task for participants related to chosen change initiatives and their stakeholders' recognition.

The second workshop was held in February 2023 and began with an affective and normative commitment survey following the suggestions of Meyer and Herscovitch (2001). The researchers decided to use the survey to measure the level of affective and normative commitment as pre- and post-measures to verify the processual development of commitment during group identity creation (Elfenbein, 2014; Meyer et al., 2002; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010). The survey was sent to participants by email, and members filled it out using their laptops before the formal workshop began.

The workshop was opened with a reflection on the last meeting, which was facilitated by the principal researcher. The role of the researchers was again clarified beforehand, and it followed the first meeting's roles. The meaning of starting the workshop with retrospective sensemaking was related to the aim of supporting the processual working of the forming group. Participants were asked to reflect on their definitions related to sustainability and take a critical approach towards their previously chosen change initiatives. Participants had worked online using the Mural platform, where they conducted some discussions related to their task to recognise significant stakeholders of chosen sustainability initiatives. Critical thinking was targeted to implementation possibilities and power available to the sustainability group related to implementation. Hence, the principal researcher asked the participants to define their chosen sustainability initiative again and set measurable targets for them.

The principal researcher asked the group members to choose one sustainability initiative for further development by walking through the process of "doing good" in the company related to the chosen sustainability initiative. Group members were also asked to draw the process of doing good related to the chosen sustainability initiative to illustrate the cognitive interpretations of the group members, following sociomaterial approach findings (Kaplan, 2011; Leonardi, 2013; Stigliani & Ravasi, 2012). The purpose of the processual drawing was to turn group members' attention towards practicalities rather than abstractions and follow how the group coped with realities related to sociomaterial resource scarcity.

The principal researcher observed the group with the senior researcher and asked them to recognise potential challenges on the way to doing good in the company. After following the group discussion and processual thinking, the principal researcher asked the group to recognise how they were following the processes of doing good in a company. After the group had clarified the process of doing good in a company related to the chosen sustainability initiative, the principal researcher asked them to reflect on their work as a group. Hence, the final sequence of the group discussion turned into a reflective focus group interview.

At the end of the second workshop, participants were asked to complete the same survey used at the beginning of the workshop using their laptops, which were closed during the workshops, preventing them from checking their initial responses. The participants did not have access to the survey after submitting it.

The manuscript of the workshop followed the structure presented here:

1. Pre-survey of affective and normative commitment.
2. Facilitated discussion: Participants reflected on the last workshop and their work as a group by remembering the given task and recognising significant stakeholders related to sustainability initiatives.
3. Group task for participants related to sustainability initiatives: Participants were asked to redefine the sustainability initiatives chosen in the previous workshop and set measurable targets for them.
4. Group task for participants: Participants were asked to choose one sustainability initiative for closer examination to develop the process model of "doing good" in a company.
5. Group task for participants: Participants were asked to draw the process of "doing good" in a company.
6. Focus group interview with the whole group and short reflection on group discussion: The principal researcher asked group members to discuss the

question, “What happened during the workshop in the group and between the members or related to other actors or material space in situ?”

7. Post-survey of affective and normative commitment.

The third workshop was held in March 2023 and again began with an affective and normative commitment survey, following the suggestions of Meyer and Herscovitch (2001). The researchers decided to use the survey to measure the level of affective and normative commitment as pre- and post-measures to verify the processual development of commitment during group identity creation (Elfenbein, 2014; Meyer et al., 2002; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010). The protocol of surveying followed the practicalities implemented in the second workshop.

The workshop began with a reflection on the role of the sustainability working group in implementing the sustainability strategy. Participants were asked to clarify their responsibilities and the process they would take to follow and manage the sustainability implementation of the company during the next fiscal year. They were asked to refine the targets of the sustainability strategy, considering the challenges they had encountered, and tasked with designing personnel guidelines for “doing good” in the company related to sustainability initiatives and creating a realistic roadmap for the implementation of the sustainability strategy. The roadmap was defined as a reachable and measurable action plan for the next fiscal year. Finally, the participants were asked to share their individual responsibilities and action steps to finalise the strategy map for the TMT.

At the end of the third workshop, participants were asked to complete the same survey that they had taken at the beginning of the workshop using their laptops, following the same research protocol as in the second workshop.

The manuscript of the workshop followed the structure presented here:

1. Pre-survey of affective and normative commitment.
2. Group task for participants: The participants were asked to clarify the role and responsibilities of the sustainability working group in a company.
3. Group task for participants: The participants were asked to refine the targets and measurements of the sustainability strategy.
4. Group task for participants: The participants were asked to create personnel guidelines for “doing good” in a company and to formulate a roadmap for the sustainability strategy.
5. Group task for participants: The participants were asked to share individual responsibilities and action steps to finalise a roadmap for the TMT.

6. Focus group interview with the whole group and short reflection of group discussion: The principal researcher asked group members to discuss the question, "What happened during the workshop in the group and between the members or related to other actors or material space in situ?"

7. Post-survey of affective and normative commitment.

6.4.2 Interviews with key informants

Key informants can deepen the understanding of the group identity phenomenon, so I asked two different individuals to participate in individual interviews based on our observations of workgroup dynamics and background information gathered before entering the ethnographic places (Pink & Morgan, 2013; Sormani, 2023). The principal researcher asked the COO to participate in an interview before the first workshop based on her organisational position in relation to power. The COO also had access to information related to stakeholders' expectations from a top management perspective. Another individual was asked to have an interview based on our observations and her own reactions after the first workshop. She reflected stakeholders' expectations from a bottom-up perspective and described organisational tensions during the workshop, acting according to the role of "lightning rod" following Ashforth and Reingen's (2014) descriptions of intergroup dynamics.

Overall, four individual interviews were arranged: three with the COO and one with the team manager. The COO was interviewed before the first workshop, after it and after the second workshop. The team manager was interviewed after the first workshop. The interview lasted 90 minutes, and the principal researcher did not record it due to the risk of sensitising the research situation and lowering psychological safety, which might lead to hindered self-presentation (Edmondson, 1999, 2011; Gylfe et al., 2016; Kahn, 1990; Knoblauch & Tuma, 2023). Field notes acted as a supporting source for data analysis to ensure triangulation. The principal researcher was a professional facilitator and process consultant, well experienced with making humble questions, facilitating groups and reflecting her own biases (Schein, E. H., 2010; Schein, E. S., 2009; Stewart et al., 2023a).

Next, I will describe the data analysis phase to create a more nuanced picture of the research techniques in use.

6.5 Data analysis

The data in this focused ethnographic research is the production of the workshop agenda, the facilitators' input and the outcomes of interactional dynamics of the participants (Farnsworth & Boon, 2010; Parker & Tritter, 2006). It was collected in iterative cycles during and between workshops, and data analysis was conducted

concurrently with data collection, following the logic of abductive reasoning (Dubois & Gadde, 2002; Golden-Biddle, 2020; Pink & Morgan, 2013). I used focus group interviews as the main technique. The main purpose of the analysis was confirmatory and driven by the proposed theoretical model of group identity creation (Kuusisto & Mäkinen, 2023). Therefore, I generated pre-codes and a codebook according to the proposed phases of group identity creation (see Figure 3) : 1) sociomaterial needs, 2) seeking emotional and unconscious cognitive resonance with group members (X-system), 3) seeking explicit similarities and differences with stakeholders (C-system), 4) resource scarcity, 5) felt appraisals and unconscious and conscious cognitive appraisals in situ, 6) displayed emotions and cognitive speech acts, 7) persuasive and authority power sensing and 8) sensing of systemic power as a group property (Guest et al., 2023). It is worth noting that each action generates some kind of response in a group. Thus, the final codebook includes descriptions of sensegiving and sensemaking, that is, action–reaction dyads related to certain pre-codes, such as displayed emotion and an actor's bodily rejection of that, which is further hindered or reinforced by other group members. I developed pre-codes based on the theoretical understanding of certain phenomena and developed them further as we observed the actors' behaviour.

There were four data gathering and analysis cycles: 1) the pre-examination phase; 2) fieldwork; 3) an analysis of video-recorded materials with two coders comparing and recognising sequences; and 4) a more nuanced examination of video-recorded material. I also analysed the quality of the data produced in workshops based on the responses generated by the facilitator's questions and group tasks by reviewing videos before entering into analysis cycles, following Guest et al.'s (2023) suggestions.

In ethnography, the pre-examination phase refers to the initial stage of the research process before the researcher enters the field (Pink & Morgan, 2013; Sormani, 2023). The researcher of this study engaged in activities such as developing research questions, conducting a literature review, and designing a research plan, as described earlier in this document. This led to a better understanding of the context as well as a theoretical framework to guide data collection and analysis. By conducting a thorough pre-examination, I improved the quality and rigour of the ethnographic study (Eisenhardt et al., 2016; Graebner et al., 2012; Sormani, 2023).

During the fieldwork period, we conducted intensive data analysis and discussions in analysing sessions about the group phenomena observed in the workshop (Knoblauch & Tuma, 2023). We also pre-analysed the videos to ensure the quality of the recordings. The principal researcher adjusted the structure of the workshops based on her observations and discussions with the senior researcher (Pink & Morgan, 2013). After the fieldwork, we started analysing the video-recorded materials with two coders, comparing and recognising sequences of sensemaking

based on the codebook in Table 2. We went through all the video material and then focused on specific segments for a more nuanced examination.

I excluded transcription due to the nature and topic of the research, the video recording and my aim to focus on group dynamics (Farnsworth & Boon, 2010; Guest et al., 2023; Gylfe et al., 2016; Knoblauch & Tuma, 2023; Parker & Tritter, 2006). Additionally, I followed Knoblauch and Tuma's (2023) suggestions of analysing sequences of video data based on actors' sensemaking episodes and reflexivity, in which they are contextualising and coordinating acting in certain sociomaterial space. The length and complexity of sensemaking episodes might vary according to the phenomenon to make sense of; for example, the length of making sense of a sudden interruption in a meeting might last only 60 seconds, while making sense of global climate change might last hours or longer. The sensemaking episode includes five phases determined by Weick et al. (2005): noticing, bracketing, retrospection, enacting and reinterpretation.

1. Noticing: Actors recognise that something unusual or unexpected has happened in situ based on immanent sensemaking, which is an ongoing process specialised to notice if something suddenly changes (Sandberg & Tsoukas, 2020). According to Healey et al. (2015), the dominant aspects are the unconscious and emotional X-system, which overrides the conscious cognitive C-system. This has been empirically tested, for example, in decision-making situations where cognitive overload is high and implicit attitudes drive behaviour. Hence, in the noticing phase of collective sensemaking, immanent sensemaking is prevalent and is based mainly on the X-system's functioning.

2. Bracketing: Actors set aside preconceptions, biases, and assumptions to approach the event or situation with an open mind and develop a contextual sense. According to Sandberg and Tsoukas (2020) the contextual sense develops at the present moment and is highly unconscious and embodied. Bracketing occurs mainly at an unconscious level when the actor is not cognitively aware of it but might sense that something is moving backwards within their inner self (Beyes et al., 2022; Sandberg & Tsoukas, 2020). As described earlier, according to the parallel–competitive dual-systems theory, in intragroup relations, group members can achieve resonance between their reflective cognitive processes and reflexive affective processes if there are sufficient similarities between these systems (Giorgi, 2017; Healey et al., 2015; Hodgkinson & Healey, 2011). These similarities and alignments between X-systems can be related to rituals, artefacts, implicit attitudes, implicit stereotypes, subconscious goals, the emotional tone of actors or their unconscious beliefs (Giorgi, 2017; Healey et al., 2015). The shared cognitive

mental models of the group have not yet been developed. This can be observed through the absence of verbalised beliefs related to the group and its mission as well as the lack of existential questions being raised (Healey et al., 2015). The members of the group are not referring to existential basic questions with their speech acts, such as "Why are we here?" or "What are the basic missions and tasks of this group?"

3. Retrospecting: Individuals and later the group reflect on their previous experiences and knowledge to make sense of the present event or situation. This process involves connecting the present situation to past experiences, memories, and knowledge to develop a conceptual understanding. Retrospecting primarily occurs at the conscious cognitive level of processing (C-system), but unconscious and emotional processing (X-system) continue to operate in parallel with the conscious cognitive system (Healey et al., 2015; Maitlis et al., 2013; Sandberg & Tsoukas, 2020). Hence, in the retrospecting phase, the group seeks conscious cognitive resonance related to individual C-systems. This can be observed through verbalised speech acts, as actors represent their mental models and beliefs, contributing to the construction of shared mental models within the group (Healey et al., 2015). This process ultimately leads to the creation of group identity.

4. Enacting: Individuals create various interpretations of the event or situation in the present moment. They may act out different scenarios or engage in dialogue to test their understanding and explore alternative perspectives. This occurs at the conscious cognitive and emotional and unconscious cognitive level of processing and is manifested through displayed emotions and cognitive speak acts in relation to the sociomaterial world (Golden-Biddle, 2020; Healey et al., 2015; Maitlis et al., 2013; Sandberg & Tsoukas, 2020). During the enacting phase of collective sensemaking, the group operates with both unconscious cognitive and emotional processing (i.e. X-system) and conscious cognitive processing (i.e. C-system).

5. Reinterpreting: In the reinterpretation phase, individuals or groups refine their understanding of the event or situation based on feedback from others or new information that emerges. They may adjust their previous interpretations or develop new ones based on the ongoing sensemaking process (Golden-Biddle, 2020; Sandberg & Tsoukas, 2011, 2020).

These sensemaking episodes form the sequences in video data that the researchers discussed in the analysing sessions (Knoblauch & Tuma, 2023). In video analysis, the orientation and moves in relation to others (i.e. social or material objects) create meaning, not the separate gestures or facial expression moves (Gylfe

et al., 2016; Heath et al., 2023a; Knoblauch & Tuma, 2023; Leonardi, 2013). Turns in sequences are a sign of dynamic shifts during discourse, manifested as linguistic or non-linguistic action (Knoblauch & Tuma, 2023).

The analysis in this study differs from traditional discourse analysis, where spoken words and displayed emotions are central to data analysis (Parker & Tritter, 2006). Here, I paid particular and primary attention to group dynamics (i.e. patterns of interactions, relationships and behaviours that emerge within a group of individuals) and affect the phenomena under focus group data production (Farnsworth & Boon, 2010; Stewart et al., 2023a). In practice, I analysed the dynamics of discourse, manifested, for example, as meaningful moments of silence, through the actions of dominant speakers or the direction of conversation (Parker & Tritter, 2006). As described earlier, I paid specific attention to the patterns of action–reaction dyads.

Paying attention to group dynamics during focus group data analysis is important because it provides insight into the ways in which individuals interact with one another in a group setting (e.g. displaying cognitive speak acts and emotional and unconscious processes) (Stewart et al., 2023a). For example, analysing the direction of discourse can reveal power imbalances and how participants engage with one another's propositions. Examining dominant speakers can provide insight into leadership and hierarchies within the group, and analysing silences can help identify moments of tension, relief or discomfort (Sormani, 2023). Overall, paying attention to group dynamics in focus group data analysis can enrich the interpretation of the data and provide a more nuanced understanding of the research topic (Farnsworth & Boon, 2010; Smith & Mackie, 2015).

Table 2. Codebook of Collective Sensemaking and Group Identity Creation.

Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
Sociomaterial needs	Sociomaterial needs refer to the needs of individuals or groups for material or social resources, such as tools, social status, safety or recognition (Orlikowski, 2007; Turner, 2005).	In the context of group identity creation, sociomaterial needs can be seen in interactions between people when individuals or groups seek to satisfy their material or social needs through the creation of a group identity. **For example:** During a workshop, participants may express their need for certain resources, such as time, money, or equipment, which are necessary for their work or activities that ultimately satisfy their socioemotional needs. **Pay attention:** During group identity creation, it is important to be aware of these driving needs as they create tensions and conflicts of interest between group members. However, more specific knowledge related to needs is not necessary to observe the phenomenon of group identity formation.
Seeking emotional and unconscious cognitive resonance with group members (X-system)	Emotional resonance seeking is based on similarity-attraction effects (Abrams & Hogg, 1990; Barsade et al., 2000; Giorgi, 2017; Healey et al., 2015; Hodgkinson & Healey, 2011). It is well known that the actors are trying to seek a bridge between cognitive and experiential dissonance by seeking reinforcement for their feelings, attitudes or thoughts in relation to others and the world around them (Barsade et al., 2000; Hodgkinson & Healey, 2011).	Primitive mimicry occurs unconsciously based on our socioemotional need to belong to the group (Elfenbein, 2014; Hatfield et al., 1993). It is based on the ability to imitate primitive facial expressions, vocalisations and bodily expressions (Hatfield et al., 1993). Observing body movements activates certain emotions that are recognised by the receiver of the emotion, who immediately and automatically reinforces or inhibits the sender's original emotion, leading to withdrawal or approach in situ (Hatfield et al., 1993).

Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
		For example: People synchronize their movements and mirror each other's bodily gesture. They raise their hands simultaneously or grab a glass of water at the same time, turn towards the same direction to observe something, and adapt their vocal tone to match one another. Such behaviour demonstrates a certain level of alignment. **Pay attention:** Note the synchronisation of movement and vocalisation in a group as a result of mimicry. Note the coherence of eye contact between group members (Dikker et al., 2017; Gustafsson, R., 2023). Observe how the coherence of eye contact between the members of the group develops, paying attention to the moments when the first eye contact is established between the dyads. Note the moment when each actor looks in the same direction. This signals the moment when emotional resonance is reached in the group.
Seeking explicit similarities and differences with group members (C-system)	The primary mechanism of emotional contagion is primitive mimicry, which leads to mechanism of social comparison according to self-categorisation theory (Elfenbein, 2014; Hatfield et al., 1993). The mechanism of social comparison is partly driven by the metacontrast principle, which leads actors to seek explicit similarities and differences (Abrams & Hogg, 1990, 2017; Elfenbein, 2014; Kouamé et al., 2022; Sandberg & Tsoukas, 2020).	The metacontrast principle leads group members to minimise ingroup differences and maximise outgroup differences to clarify the boundaries of the embryonic group, leading to increasing tensions with perceived outgroups (Abrams & Hogg, 1990). The researchers used the survey to measure the level of affective and normative commitment as pre- and post-measures to verify the processual development of commitment during group identity creation (Elfenbein, 2014; Meyer et al., 2002; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010).

Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
	Affective commitment is sensed and felt through our sensory system based on emotional resonance (Elfenbein, 2014; Giorgi, 2017; Herrbach, 2006; Kouamé et al., 2022). Affective commitment develops towards those with perceived similarities, for example, related to values, attitudes, behavioural acts, cognitive mental models or beliefs (Barsade et al., 2000; Elfenbein, 2014).	The levels of affective and normative commitment are measured to verify their progression during group identity creation, using a well-documented survey of workplace commitment developed by Meyer and Herscovitch (2001). The results of the survey are shown in Appendix X. **For example:** Group members may emphasise differences between their own group and other groups while minimising differences within their own group. They may use language, symbols or rituals to reinforce their shared identity and distinguish themselves from other groups. They may also engage in stereotyping or prejudice against members of other groups based on perceived differences. **Pay attention**: Note the first moment when someone begins to share similarities with another group member. This moment indicates that affective commitment is strong enough to clarify outgroup differences. Note the first moment when someone verbalises outgroup differences. This moment indicates that the metacontrast principle is activated and that the group has identified outgroup differences. **Measure**: Use the survey to measure the level of affective and normative commitment as pre- and post-measures to verify the processual development of commitment during group identity creation (Elfenbein, 2014; Meyer et al., 2002; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010).

Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
Facing resource scarcity	Turner (2005) highlighted the significance of power as a contextual element in the process of group formation. According to Turner, the dynamics of a group during its formation can be explained by the presence of resource scarcity and how actors respond to it.	Power is closely linked to resource scarcity, which is a fundamental aspect of human life. Both socioemotional and material resources are inevitably scarce in any human interaction. **For example:** People refer to lack of top management support, lack of time, knowledge, personnel, competing priorities or budget to execute their mission. **Pay attention:** Note the moment when the discourse begins in relation to the perception of resource scarcity in a group. Note whether the actors perceive resource scarcity through their personal identity or through their group identity.
Assessing felt emotions and conscious and unconscious cognitive appraisals in situ	Normative pre-commitment evokes felt emotions and cognitive appraisal, leading to actors influencing others through cognitive speech acts and displayed emotions that affect group dynamics.	Given the scope of my research, I excluded the coding of empirical evidence here. The focus is not on the emotions felt by the actors but on the strengthening and weakening of embodied cues associated with positive or negative emotions during evolving group-level sensemaking in the formation patterns and stages of the group identity formation process (Gonzaga et al., 2001). Furthermore, the focus is not on intra-individual phenomena but on group-level phenomena created by participants in situ (Smith & Mackie, 2015).
Producing persuasive and authoritative power by displaying emotions and engaging in cognitive speech acts	Persuasive power is related to the actor's social skills, emotional intelligence and ability to negotiate with others on the important issue of the group's existence (i.e. identity). It is highly visible when group members disagree with each other. According to Turner (2005), persuasive power is a "function of group identity and consensus" (p. 10), so every	Resource awareness is present when someone is producing persuasive and authoritative power.

Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
	situation faced is evaluated in relation to the core defining characteristics of the group, such as its norms or values. The term “persuasive” originally comes from self-categorisation theory (SCT), where persuasive action is “the collective attempt by a group to develop a consensual response to a stimulus situation” to continue acting (Turner, 2005). Authoritative power refers to the influence and control exerted by an individual or entity based on their recognized position, expertise, or official role within a particular context or organization. This type of power is often associated with formal leadership positions, titles, or roles that grant the person a level of legitimacy and the right to make decisions, give orders, and direct the actions of others (Turner, 2005).	**For example:** A manager exercises authority power by making decisions that align with the company's goals and strategies, and their subordinates are expected to follow those decisions. In a team setting, a leader uses persuasive power to inspire and motivate team members, encouraging them to contribute their best efforts toward a common goal. **Pay attention:** Note the moment of disagreement in relation to important issues of group existence or resource utilization. Asynchronous body movements may occur. Note the moments when identity claims move from the individual to the group level (i.e. from “I” to “we”). Remember that emotional control mechanisms can be manifested through the non-verbal communication of group members, such as silence in response to a joyful suggestion or adjusting one’s body position in relation to the person speaking (Gylfe et al., 2016).
Sensing persuasive and authoritative power	Persuasive power is related to the actor’s social skills, emotional intelligence and ability to negotiate with others on the important issue of the group’s existence (i.e. identity). It is highly visible when group members disagree with each other. According to Turner (2005), persuasive power is a “function of group identity and consensus” (p. 10), so every situation faced is evaluated in relation to the core defining characteristics of the group, such as its norms or values. The term “persuasive” originally comes from self-categorisation theory (SCT), where persuasive action is “the collective	Given the scope of my research, I excluded the empirical evidence coded here.

Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
	attempt by a group to develop a consensual response to a stimulus situation" to continue acting (Turner, 2005). Authoritative power refers to the influence and control exerted by an individual or entity based on their recognized position, expertise, or official role within a particular context or organization. This type of power is often associated with formal leadership positions, titles, or roles that grant the person a level of legitimacy and the right to make decisions, give orders, and direct the actions of others (Turner, 2005).	
Sensing systemic power as a group property	Practical logic is formed through organizational history and cultural identity formation in relation to the organisational systemic environment (Bacharach et al., 1996; Sandberg & Tsoukas, 2011; Schein, 2010). Turner (2005) proposed in his three-process theory of power that power is produced during group formation and is closely related to the identity issues of the group, which ultimately affect the systemic power in a particular organizational system.	Nascent group identity develops from embryonic group identity to the moment of adult group identity. The end of the normative discussion and the expression of readiness to face the outgroup signals that the group has developed a nascent group identity, which supports the implementation of the group's basic mission in a given organisational system. The researchers decided to use the survey to measure the level of affective and normative commitment as a pre- and post-measure to examine the processual development of commitment during the creation of group identity (Elfenbein, 2014; Meyer et al., 2002; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010). **For example:** The group exhibits a strong sense of togetherness and solidarity. Members feel connected to one another and show support for each other both inside and outside the group. The group has well-defined goals and objectives that members are enthusiastic about achieving collectively. They work collaboratively towards these goals. They may express a strong commitment to these shared ideals.

Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
		Pay attention: Embryonic group identity could be detected as a moment of silence, where the bodies and voices of the actors were relaxed, and the group members were focused/attuned on each other. Nonetheless, the group is not yet prepared to face an external audience, and the fundamental task remains unclear. “It is really nice that we have something concrete to establish; however, we have to continue to work with these”. Notice the readiness to present core identity claims to external audiences, such as the TMT, in the form of explicit speech acts (Boje, 1995; Brown, 2004; Brown et al., 2015; Giorgi, 2017; Sandberg & Tsoukas, 2020; Turner, 2005). The group shows signs of strengthened group self-esteem by demonstrating readiness to present its core existential identity claims to outgroups. **Measure**: The survey is used to measure the level of affective and normative commitment as pre- and post-measures to verify the processual development of commitment during group identity creation (Elfenbein, 2014; Meyer et al., 2002; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010). The results of the survey are shown in Appendix X.

In conclusion, the codebook acted as the core guidance for my data analysis (see Table 2. Codebook of Collective Sensemaking and Group Identity Creation. It was created based on the theoretical development of Kuusisto & Mäkinen`s, (2023) proposed model of group identity creation, following Braun and Clarke's (2021) "codebook approach" to thematic analysis (TA). Throughout the analysing cycles, the researchers engaged in the process of reflexivity, which involved reflecting on their own biases, assumptions and preconceptions that may have influenced the analysis (Braun & Clarke, 2021). This process of reflexivity helped the researchers identify potential sources of bias and develop a more objective and nuanced analysis of the data while recognising the subjectivity of the researchers' interpretations in a certain context (Braun et al., 2022; Graebner et al., 2012). Next, I will discuss the empirical findings of group identity creation based on the analysis process described above.

7 Empirical findings of group identity creation and discussion

The empirical findings of this research are described in this chapter, organised according to the modified model's phases of Group Identity Creation in Figure 3. For clarity, the eight phases have been analysed as described in the previous chapter, with key actions and turns of group dynamics described in a logical order: 1) sociomaterial needs; 2) seeking emotional and unconscious cognitive resonance with group members (X-system); 3) seeking explicit similarities and differences with group members (C-system); 4) facing resource scarcity; 5) assessing felt and conscious cognitive appraisals in situ; 6) producing persuasive and authoritative power by displaying emotions and engaging in cognitive speech acts; 7) sensing persuasive and authoritative power; and 8) sensing systemic power as a group property.

To clarify the terminology used in this research, the term "embryonic" group identity refers to the initial round of collective sensemaking episodes, while "nascent" group identity describes the stage in which the group has reached a point where they already share a common history to reference and ground further identity creation. An "adult" group identity refers to the stage in which the group becomes aware of systemic power (Gioia et al., 2010; Turner, 2005). This signifies that the group is ready to confront external audiences (i.e. outgroups) and withstand pressure in defence of its existence. Following this stage, the development of an adult group identity begins. Therefore, the dynamics of group identity creation can be divided into two stages: the development of embryonic group identity, followed by the formation of nascent group identity, until the group attains the ability to sense systemic power and establish an adult group identity.

Next, I will delve into the empirical results of this research and discuss them simultaneously.

7.1 First workshop as an arena for embryonic group identity creation: Empirical findings and discussion

I followed the structure of the first workshop, as described in the chapter "The workshops as arenas for group identity creation",and described the turns and moments of collective sensemaking episodes as they unfolded during the creation of group identity. In the first workshop, I discovered one sequence of collective sensemaking following the focus group analytical framework described earlier. This sequence included one episode of collective sensemaking and one iterative cycle of group identity creation. The modified theoretical model of group identity creation (see Figure 3) posited that the early phase of group identity creation ends when the group signals its readiness to present itself to an external organisational audience (Cornelissen & Werner, 2014; Giorgi, 2017; Kouamé et al., 2022; Kuusisto & Mäkinen, 2023; Scott & Lane, 2000; Turner, 2005). Hence, I followed iterative cycles of group identity creation until the moment when the group signalled its readiness for an external audience. This occurred during the third workshop, as described later in the chapter titled "Third workshop as arena for nascent group identity creation".

The first sequence of collective sensemaking lasted for one hour and 45 minutes (00:00:00 to 01:45:00). As a result of this initial sequence, the embryonic group identity formed. This interpretation was confirmed through empirical evidence gathered during the second workshop at 00:21:33 (see Figure 30) and during the third workshop at 00:10:06 (see Figure 40). It was observed that the dynamics of group identity creation shifted as the group bypassed the transitional phases of individual-level sensemaking and transitioned directly to group-level sensemaking from the retrospecting phase. The results of the commitment surveys provided further validation of the formation of the embryonic group identity during the first sequence of collective sensemaking.

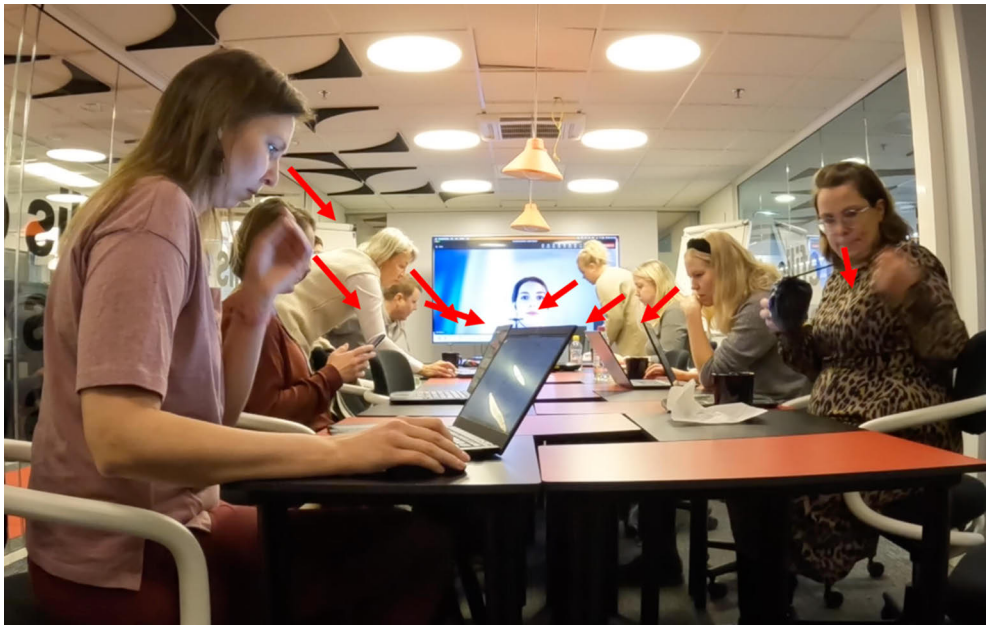

Figure 5. Noticing phase of the first sequence at 00:05:44. Actors are avoiding direct eye contact with each other and staring at their mobile devices while sensing the environment around them.

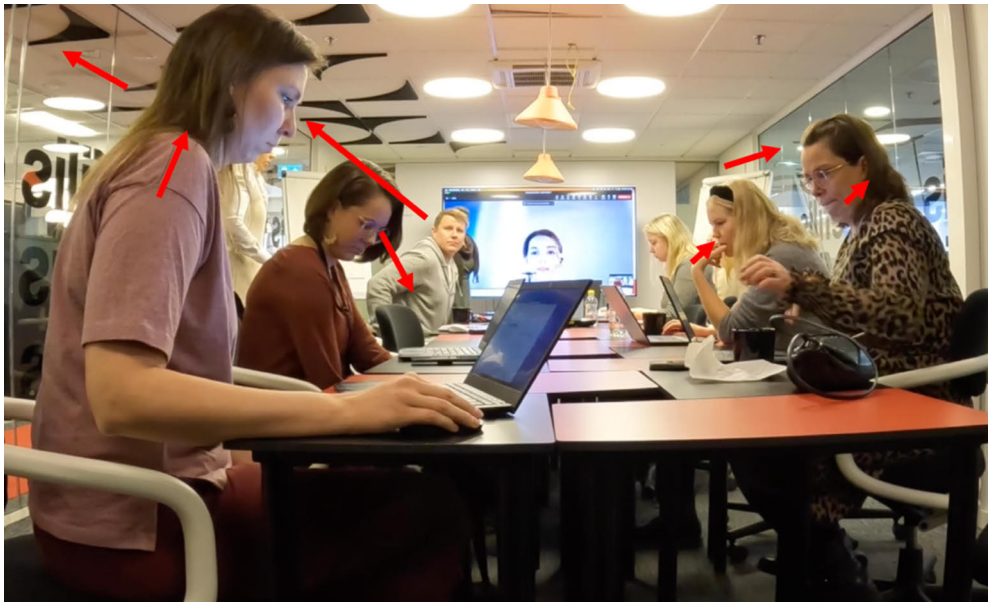

Figure 6. In the noticing phase of the first sequence at 00:06:00, tension arises. Actor 1 attempts to contact his team members, seeking emotional and unconscious cognitive resonance. The other actors have changed their positions in the direction indicated by the arrows, gradually opening their torsos towards others. The individual level of the bracketing phase is beginning.

I began to observe the group's interactions from the moment the last members of the group entered the room at 00:05:03. According to sensemaking theory, immanent sensemaking is an ongoing process that is always prepared to activate contextual sensemaking processes in response to significant environmental changes that require reflection on present habitual or ongoing actions (Beyes et al., 2022; Sandberg & Tsoukas, 2020). Consequently, seeking emotional and unconscious resonance becomes a continuous underlying process during group identity creation (Giorgi, 2017; Healey et al., 2015; Sandberg & Tsoukas, 2020). If the resonance between individuals and the environment is disrupted, the noticing phase of collective sensemaking is activated (Sandberg & Tsoukas, 2011, 2020; Weick, 1995). It is highly likely that this disruption occurs when people encounter new members of the working group for the first time due to a lack of shared mental models and unfamiliarity with the new members. Therefore, we can assume that the individual level of the noticing phase is always active and serves as the foundation and initial phase of collective sensemaking.

During the noticing phase of collective sensemaking, the group consciously avoided direct eye contact (see Figure 5 and Figure 6 above) to mitigate the feeling of social pressure to connect and to focus on sensing the changing sociomaterial environment (Ayers, 2003). Instead, they engaged in quick, polite smiles and head nodding to display calming patterns of interaction, creating a socially polite space for the group to identify shared similarities and organise itself (Aguinis & Henle, 2001; Kudesia & Elfenbein, 2013). However, they also displayed signs of insecurity, such as self-touching, drinking water, and restlessly moving to find a more comfortable position in relation to others. I interpreted these behaviours as indicators of seeking emotional and unconscious cognitive resonance, which started to function immediately after the whole group gathered inside the meeting room. This seeking of emotional and unconscious cognitive resonance is considered a fundamental survival mechanism for humans to cooperate (Ayers, 2003; Turner, 2005). The embodied immanent sensemaking type activates the noticing phase of collective sensemaking according to sensemaking theory (Sandberg & Tsoukas, 2020). Hence, the proposed theoretical model of group identity creation and its phase of seeking emotional and unconscious resonance is intertwined with the noticing phase during collective sensemaking (Giorgi, 2017; Kuusisto & Mäkinen, 2023; Sandberg & Tsoukas, 2020).

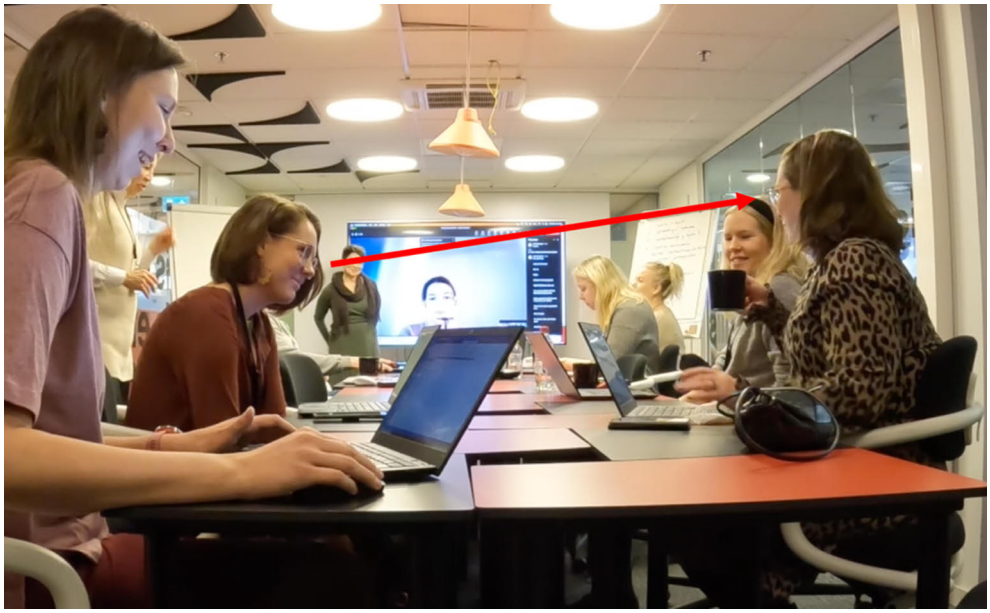

Figure 7. At the individual level of the bracketing phase of the first sequence at 00:06:33, Actor 3 is attempting to make eye contact with Actor 5, who is promising to join the next meeting despite having a vacation.

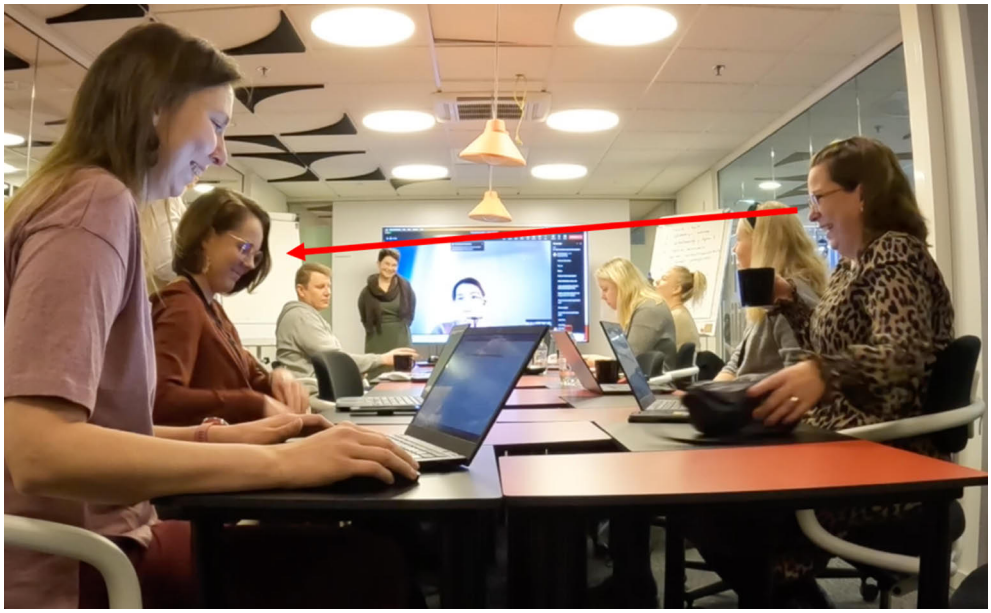

Figure 8. At the individual level of the bracketing phase of the first sequence at 00:06:34, Actor 5 is attempting to make eye contact with Actor 3 after she reveals that she can join despite being on vacation. She has noticed Actor 3's previous attempt to establish contact. However, she withdraws her gaze after realising that the eye contact was rejected as a sign of insecurity.

Interestingly, actors attempted to approach the group situation with a more open mind after the first actor made an explicit speech act indicating the personal importance of group membership. I noticed that the group dynamic changed, and the bracketing phase began at 00:06:33 when Actor 5 expressed that she would prioritise being part of the sustainability working group instead of taking a holiday outside the office (Figure 7.) As described earlier in theory section, according to identity literature, individuals continuously evaluate the value of group membership for themselves, projecting their own beliefs, displaying emotions and engaging in cognitive speech acts during interactions that affect the ingroup dynamics (Abrams & Hogg, 2017; Ashforth & Reingen, 2014; Herrbach, 2006; Mackie & Smith, 2017; Terry et al., 2000). Actor 5`s speech act signalled to the group that the value of group membership might be high and that they would be socially appreciated if they engaged with the group (Abrams & Hogg, 1990, 2017; Bergami & Bagozzi, 2000; Meyer & Parfyonova, 2010; Somers, 2009).

During the bracketing phase of collective sensemaking, the group members attempted to deepen their initial contact with some of the other members by subtly shifting their gaze between them while seeking emotional and unconscious resonance (Sandberg & Tsoukas, 2020; Weick et al., 2005). Members tried to make eye contact with each other (see Figure 8), but they did not engage in dialogue to connect at the cognitive level, resulting in speech acts that did not lead to conversations (Ayers, 2003; Gustafsson, R., 2023). Members were more prepared to open themselves to dialogue by giving hints of their emergent group identity, but they were still excluding conscious cognitive resonance seeking while seeking its existence. Nervous laughter, meaningless chatting and wandering gazes between the actors' mobile devices and the group members were observed. Although some actors momentarily displayed signs of opening themselves to interaction with their hands or heads, their torsos remained mainly closed, indicated by crossed arms and forward-leaning shoulders (Beyes et al., 2022; Gylfe et al., 2016). There was a lack of movement synchronisation, but actors moved around a lot while trying to discover and sense the emotional and unconscious resonance between different dyadic relations compared to later phases of the first sequence.

The interaction between dyads and the group as a whole led to emergent collective sensemaking, in which the group moved towards the next phase after all members of the group had gone through the individual processes of this sensemaking phase of bracketing. In conclusion, the proposed model of group identity creation and its phase of seeking emotional and unconscious resonance is also intertwined with the bracketing phase during collective sensemaking (Golden-Biddle, 2020; Kuusisto & Mäkinen, 2023; Sandberg & Tsoukas, 2015, 2020; Weick et al., 2005).

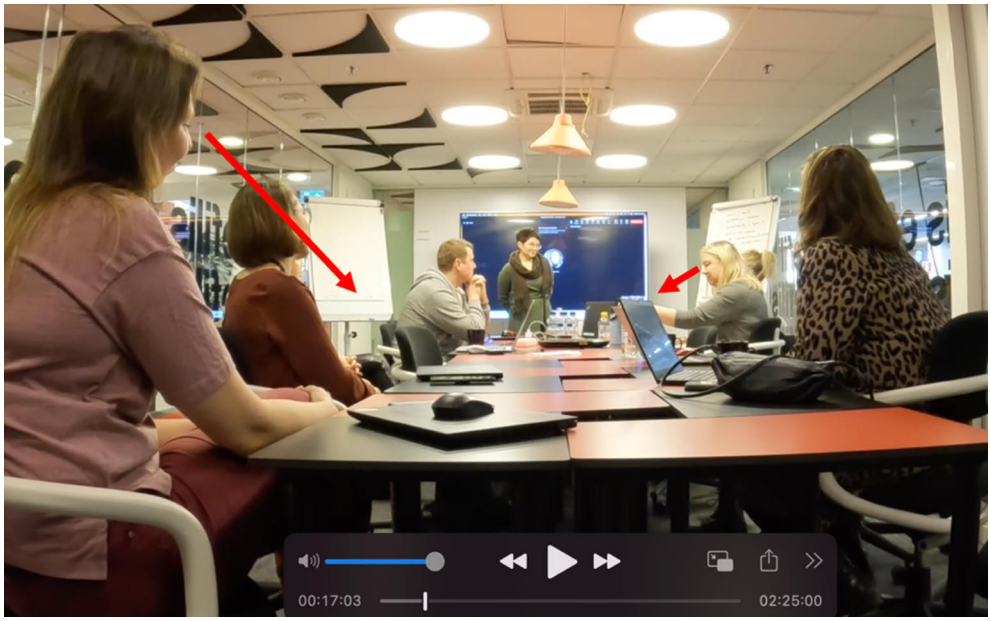

Figure 9. At the end of the bracketing phase of the first sequence at 00:17:03, Actor 4 and Actor 7 are the last ones without eye contact with Actor 8, who has just started to introduce herself to the group.

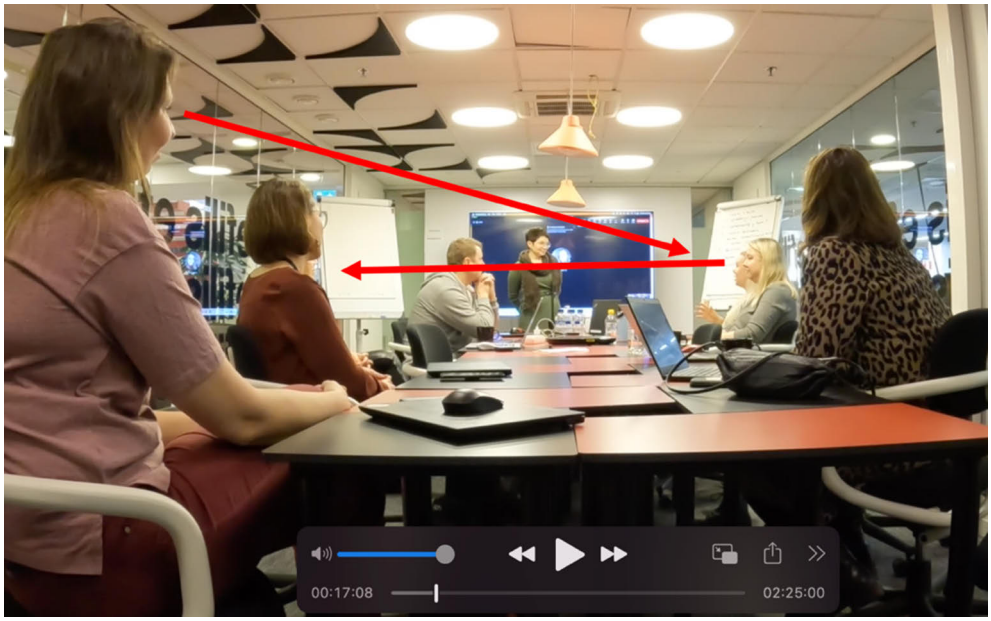

Figure 10. At the end of the bracketing phase of the first sequence at 00:17:08, Actor 4 has established eye contact, while Actor 7 is seeking conformance of pre-normative commitment from Actor 2, who holds the highest organisational hierarchical status in the room.

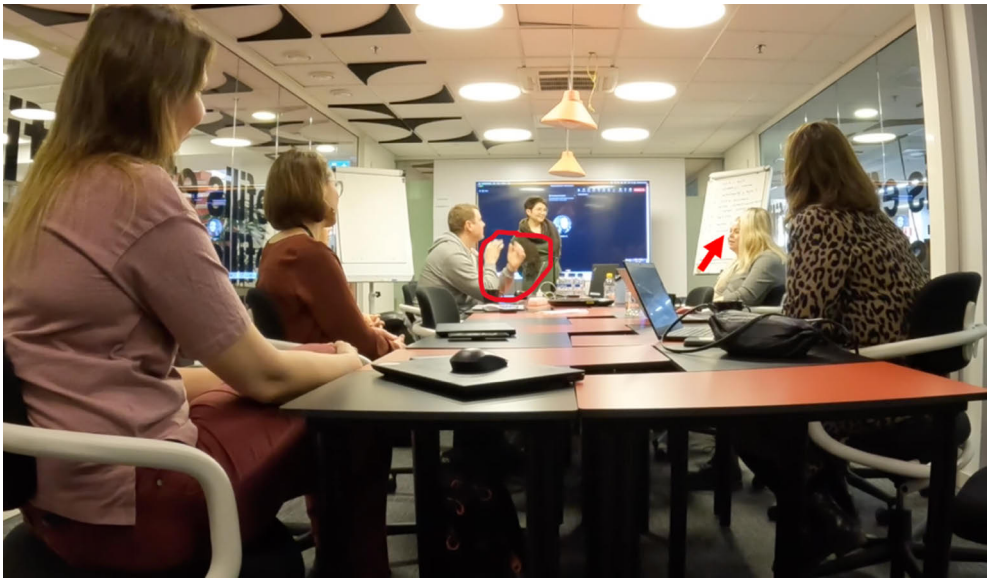

Figure 11. At the end of the bracketing phase of the first sequence at 00:17:09, all group members have established coherent and timely eye contact with Actor 8. Actor 1 opens his arms right after Actor 7 establishes eye contact with Actor 8.

The group-level bracketing phase ended at 00:17:09, and individual-level retrospecting began, leading to group-level retrospecting gradually emerging (Figure 11). I interpreted that this shift occurred after all members of the group had established coherent eye contact and turned their bodies towards Actor 8 in a coherent manner, indicating their readiness to engage in retrospecting sensemaking without verbalised words (Figure 9, Figure 10 and Figure 11). Additionally, Actor 1 opened his arms right after Actor 7 established eye contact with Actor 8. Actor 8 initiated the emergence of a new phase by reflecting on her previous experiences and knowledge, aiming to make sense of her motives for joining the sustainability working group. This cognitive speech act aligns with sensemaking theory and the retrospection phase of the sensemaking episode, in which individuals make sense of past experiences in relation to the current situation (Sandberg & Tsoukas, 2011, 2015, 2020; Weick et al., 2005; Weick, 1995). The process of detached-deliberate sensemaking is prevalent in this phase, in which individuals engage in deliberate and detached reflection, activating each other's conscious cognitive processing (Healey et al., 2015; Sandberg & Tsoukas, 2020).

During the introduction round of group members, parallel with the retrospecting phase of collective sensemaking, the group members began actively seeking explicit similarities and differences by emphasizing their motives for participating in the sustainability working group. This was observed through behavioural acts. For instance, they identified similarities and nodded their heads as a sign of accepting

each other's presented qualities of initial group membership (00:17:17). Signs of hesitancy were displayed by members remaining still with their bodies. Actor 4 was the first member of the group to explicitly refer to similarities with another group member, stating, "Sustainability is an important value in my personal life, similar to Actor X. However, I can see the need to consider it in my own profession and department as well" (00:19:41). The group began seeking and narrating differences by contrasting their own values and thoughts related to embryonic outgroups. According to SCT, these actions indicate that the metacontrast principle and similarity attraction were at play at this stage of group identity creation (Abrams & Hogg, 1990, 2017; Barsade et al., 2000; Elfenbein, 2014; Kouamé et al., 2022; Sandberg & Tsoukas, 2020).

It is worth noting that the differences were explicitly narrated later than the similarities, which aligns with the proposed model's theoretical assumptions regarding the order of its phases (i.e. affective commitment precedes normative commitment) (Kuusisto & Mäkinen, 2023). For instance, one member of the group stated, "I am irritated by some companies' greenwashing, and I would like to integrate sustainability into structures" (00:21:24). I interpreted this as an indication that to foster group cohesion, the members of the group avoided referring to their negative feelings in relation to potential outgroups until they sensed that the affective commitment was strong enough to sustain potential tensions related to values and negative emotions (Barsade et al., 2000; Fredrickson & Branigan, 2005; Herrbach, 2006; Mercurio, 2015). Positive emotions enhance actors' thought–action repertoires and construct psychological safety in a group; thus, the observed group behaviour is coherent with theoretical knowledge (Fredrickson, 2001; Fredrickson et al., 2003; Fredrickson & Branigan, 2005). As the introduction progressed, the participants' bodies gradually relaxed and their shoulders loosened a bit. This relaxation of the shoulders and arms was observed after Actor 4 signalled the identification of similarities at 00:19:41. These behavioural signs confirmed my theoretical interpretation regarding the significance of positive emotions and psychological safety in the situation (Edmondson, 1999, 2011; Frazier et al., 2017).

Figure 12. The group-level retrospecting phase began at 00:23:12 after Actor 1 referred to the common history of group members related to the sustainability kick-off situation in April 2022.

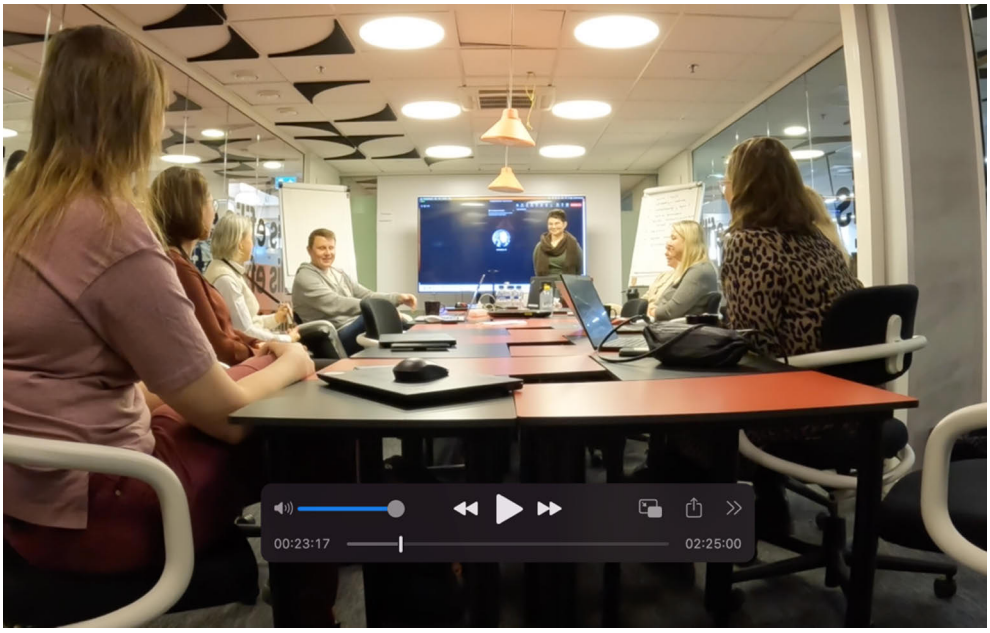

Figure 13. Actor 2 takes her ID card in hand to cover her torso as a protective gesture against the implicit testing of TMT integrity related to the sustainability strategy (00:23:17).

The group-level retrospecting phase began at 00:23:12, when Actor 1 initiated a discussion about the collective history of the group members in relation to the company-level sustainability kick-off situation in April 2022 (Figure 12). Actor 1 aimed to validate his interpretation of the group's purpose and engaged in dialogue with others, referencing Actor 2's previous speech on greenwashing and past discussions within the group. This dialogue gradually shifted the group towards the enacting phase of collective sensemaking, in which members engaged in dialogue to construct a shared group identity by exploring their implicit and explicit attitudes towards social objects in the given context. It is noticeable that the group-level retrospecting phase was relatively short (00:23:12–00:23:17) compared to the phases of the second and third workshops probably due to the lack of a common group history.

A few seconds after Actor 1's implicit attitude testing at 00:23:17, Actor 2 made a protective gesture by holding her ID card against her torso, possibly signalling a subconscious behavioural response to the implicit testing of TMT integrity concerning the sustainability strategy (Figure 13). Actor 1 then explored various interpretations of the TMT's motives for establishing the sustainability working group by asking questions such as "What has happened? Why is this relevant now in our company? A few years ago, there was no talk about sustainability" (00:23:56). Actor 1 expressed concerns about resource scarcity and observed a lack of sustainability knowledge, which could potentially intensify workforce competition. Additionally, Actor 1 highlighted the need for social support from the TMT after an indirect critique of it (00:24:15). This moment of indirect critique was the first sign of explicit persuasive power.

According to Healey et al. (2015), when group members share attitudes, they tend to have similar feelings towards organisational issues, which leads to coherent courses of action. However, it is possible that the members of the group had similar explicit attitudes at the conscious cognitive level (C-system) but differing implicit attitudes at the unconscious and emotional level (X-system). Implicit attitudes can drive reactive behaviour, which might explain why actors express explicit agreement with certain issues while implicitly disagreeing, as evidenced by their avoidant behaviour (Healey et al., 2015). The moment described above, occurring from 00:23:12 to 00:23:17, empirically identified conflicted attitudes between the actors' X-system levels, while the actors expressed similarity at the conscious level through their C-systems. This was evident through the reactive acts depicted in Figure 12 and Figure 13. To maintain the privacy of the company, I am unable to provide further details regarding this specific moment.

Figure 14. Actor 1 implicitly sets the stage for a normative discussion and initiates a conversation about the group's norms at 00:24:42. The entire group nods in response to his explicit concerns regarding greenwashing and his implicit suggestion to proceed with the normative discussion. The nodding heads of the group members indicate their pre-commitment to the preliminary norms established verbally during the introduction round.

Actor 1 implicitly set the stage for a normative discussion and initiated a conversation about the group's norms. This launched the individual level of the enacting phase in collective sensemaking, which involved recognising resource scarcity and establishing preliminary norms during the formation of the group's identity at the group level, as proposed in the theoretical model of group identity creation (Kuusisto & Mäkinen, 2023). These preliminary norms centred on the group's implicit decision to avoid greenwashing, making the speech a foundation for normative discussion. Furthermore, when Actor 1's speech ended at 00:24:42, the entire group nodded in response to his explicit concerns regarding greenwashing and implicit suggestion to proceed with the normative discussion (Figure 14). The nodding heads of the group members indicated their pre-commitment to the preliminary norms established verbally during the introduction round, as theoretically proposed in relation to the implicit and explicit resonance among group members (Giorgi, 2017; Healey et al., 2015; Kouamé et al., 2022; Kouamé & Liu, 2021). In this context, the term "pre-commitment" refers to the ongoing process of the group's commitment until all members can fully support the established group identity in front of the organisational audience. The enactment phase is pivotal for engaging in normative discussions and creating a cohesive group identity.

The enactment phase of collective sensemaking gradually unfolded as individuals actively engaged in dialogue. During this phase, they enacted various scenarios to test their current understanding and explored alternative perspectives that had the potential to shape more permanent group norms. It is crucial to highlight that engaging in dialogue requires a sufficient level of affective commitment (Elfenbein, 2014; Herrbach, 2006). Therefore, based on my interpretation, I determined that the level of affective commitment within the group was sufficient to proceed with individual-level enactments at this stage. Furthermore, I excluded the survey during the first workshop to avoid potential disturbances during the early phase of group identity creation. The results of the survey conducted at the beginning of the second workshop confirmed my previous interpretation (Appendix X). Affective and normative commitment were well developed at the beginning of the second workshop. It is worth noting that the group did not have informal meetings between the workshops.

The moment the group became aware of resource scarcity fostered the need for normative discussion. This led to the recognition of the necessity for collective agreement regarding resource allocation, which was evident at 00:23:56. Actor 1's speech regarding resource scarcity, particularly the acknowledged lack of sustainability knowledge and concerns about maintaining a competitive position in the market, stimulated group dynamics in such a way that persuasive and authoritative power began to emerge at the group level. This was observed through individuals' cognitive speech acts and displayed emotions from 00:23:56, aligning with the theoretical model of group identity creation (Kuusisto & Mäkinen, 2023). These power dynamics involved rhetorical acts based on individual-level interpretations (i.e. "I"), while the group members did not utilise a collective narrative that would have employed interpretations at the group level (i.e. "we"). These empirical observations provide evidence that supports Turner's (2005) perspective on the significance of power as a contextual and controlling element in the group formation process, particularly in relation to realised resource scarcity.

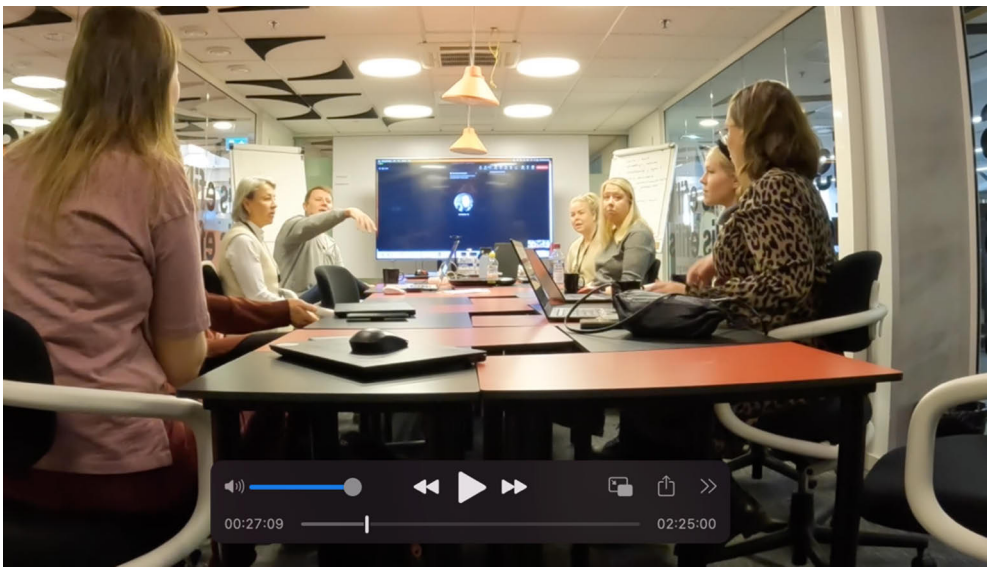

Figure 15. The group mitigated tension by dividing itself into two small groups at 00:27:09. Actor 1 gestured with his hand and suggested that the group divide.

The principal researcher interrupted the group after they had indicated their pre-commitment to avoid greenwashing and assigned them a task to clarify and document the meaning of sustainability in the company's context based on the pre-materials and their collective knowledge. To mitigate tension, the group divided itself into two smaller groups at 00:27:09 and continued working separately until 00:40:06 (Figure 15, Figure 16). During this small group work, the individual level of the enactment phase in collective sensemaking gradually emerged. This was evident through intensified normative discussions about sustainability in the organisational context, such as the question, "Is it the case that money is prioritised over responsibility in our decision making, or how will we prioritise?" (00:29:49). Members tested the emerging understanding of the group's norms by engaging in intense discussions while politely offering different interpretations to each other. Importantly, they did not seek external authority or rely on organisational roles.

The group's decision to divide itself into two separate small groups signalled that the phase of pre-normative commitment could be fragile and tense in the early stages of group identity creation. The group was not yet ready to continue working as a cohesive unit, but they resolved the intensified tensions by dividing into smaller groups. It is important to acknowledge that group size is likely to have influenced this decision, although I exclude a more nuanced examination of the relationship between group size and group identity creation. Nevertheless, this empirical evidence aligns with the findings of Ashforth and Reingen (2014) regarding ingroup and outgroup dynamics. In this specific case, the group created temporary ingroup

and outgroup dynamics, which became apparent after the group decided to reunite. One member of the group humorously asked, “Should we have a boxing competition now?” (00:40:08), reflecting the tensions between the sub-groups and the underdeveloped group cohesion at that point in the group identity-creation process. The group compared the quality of their individual group work for a while before they began sharing their thoughts and ideas related to the task at hand.

Figure 16. The group decides to unite at 00:40:06.

The comparison between the two groups continued until 00:44:09. At that point, Actor 4 asked, “Could you please clarify what you meant when you asked for an explanation regarding the suggestion that our company’s values might potentially include sustainability?” This moment fostered a connection between the two sub-groups and propelled the entire group into a phase of fully developed group-level enactment in collective sensemaking. During this phase, the entire group actively engaged in dialogue and explored various scenarios at an abstract level in response to Actor 4’s question. Notably, the group members transitioned from using “I” to using “we,” indicating a shift towards the group-level enactment phase in collective sensemaking. In other words, the enactment phase began at this moment at the group level, and the group was ready to sustain its tensions without splitting into smaller sub-groups.

However, the group could not complete their task within the 20 minutes given, and the researchers decided to give them an extra 2 minutes to test their ability to create a unified definition related to sustainability in their company. The discussion evolved to a point where the group members began discussing practical issues in the world of practice, attempting to transition from the higher abstraction of discourse to the practical realm of decision making and action to create norms for decision making within the group. Actor 3 provided an example from the practical world related to the discussion on the definition of sustainability: "Sustainability is like being in the candy department in a grocery store, where you must decide whether to take fair-trade chocolate or chocolate produced in your home country. It is difficult to know the consequences of one's decisions. However, one must consider different outcomes in real life instead of just talking about it" (00:46:16).

Figure 17. Tension grows, and three members of the group raise their hands to emphasise their feelings of anxiety in the face of the unresolved group task (00:47:02).

Following Actor 3's statement, the three members of the group engaged in a discussion that implicitly touched upon the conflicting interests of stakeholders and the challenges of making decisions related to sustainability. Tension grew, and three members of the group raised their hands and started speaking out of turn, laughing with loud voices to emphasise their feelings of anxiety regarding the unresolved group task and limited resources (Figure 17). At this point, the principal researcher interrupted the group discussion and asked the group members to reflect on the

previous discussion and make decisions regarding the sustainability initiatives to be included in the company's sustainability strategy (00:47:33).

The decision to interrupt was made based on the researchers' observations and their perception that the group needed clarification regarding its fundamental mission: to create and present an implementation plan for the company's sustainability strategy. The researchers believed that this clarification could be achieved by posing new questions. It is important to note that the participants were provided with background material on sustainability initiatives and were asked to familiarise themselves with them. The group members were aware of the group's basic mission of supporting the implementation of the sustainability strategy. However, they appeared unwilling to discuss it despite having the opportunity to do so. They did not engage in discussions about decision-making principles or rules and skipped the clarification discussion about the group's fundamental mission in relation to the focal organisation. Instead, they delved straight into the task at hand, disregarding the significance of engaging in meaningful discourse about the group's existential questions.

Figure 18. At one point, a group member exits the room, and no one makes eye contact or engages with each other, even though one member has proposed a specific sustainability initiative as a strategic choice (00:50:29).

The principal researcher assigned a new task in the form of questions and attempted to step back to observe the dynamics of the group's work. However, the group members were hesitant to let go of the support provided by the principal researcher and began engaging in conversation with her while avoiding direct communication with each other. This behaviour indicated underlying tensions that arose from the pressure of making decisions regarding the direction of the working group's sustainability strategy. Nonetheless, the group had previously managed to build sufficient cohesion to continue the discussion as a whole group. This was evident at 00:50:08, immediately after the principal researcher stepped away, when the group members started appealing to different authorities, exerting persuasive and authoritative power as a collective entity. They sought to make decisions about the selected sustainability initiatives that had been developed during the sustainability strategy kick-off situation in April 2022.

Actor 6 initiated a discussion by considering the suggestions from the personnel to engage in charity work during working hours. Interestingly, no one made eye contact or engaged with each other, even though the actor proposed a specific sustainability initiative as a strategic choice (Figure 18). Actor 6 stated, "It has become evident through numerous personnel suggestions that they are eager to participate in charitable activities during work hours" (00:50:08). This moment marked a new phase in group identity creation, and the group entered a phase in which authoritative power was generated through emotional displays and cognitive speech acts in the situation. People began appealing to values, different stakeholders' authority in relation to the group, and their personal roles and duties within the organisational system (Schildt et al., 2020; Turner, 2005). Hence, persuasive power was displayed earlier during group identity creation at 00:23:17, coinciding with the beginning of the individual-level enactment phase, and authoritative power was displayed later at 00:50:08, when Actor 6 referred to personnel suggestions made during the kick-off situation in April 2022. However, the enactment phase of collective sensemaking was still ongoing, and the group did not split into sub-groups. Instead, they tested different scenarios in a group, further developed their decision-making norms and strengthened their group identity.

Due to the confidentiality of the case company's sustainability work, I am unable to provide a more detailed description of the working group discussion during the normative loop of group identity creation. As mentioned earlier, persuasive and authoritative power were strongly evident during the subsequent 55 minutes of group discussion, when the group presented different scenarios and explored various alternatives. Importantly, the group continued to work as a united entity. During this phase of group identity creation, the group members made numerous appeals to different authorities or to their own roles and duties within the organisational system. This is well aligned with (Turner, 2005) three-process model of power. They began

formulating identity claims related to appeals, such as, “It is important that we (as a working group) can present plausible arguments for personnel” (00:55:28). Identity claims could be interpreted as an explicit sign of group identity creation (Corley & Gioia, 2004a; Gioia et al., 2010). This moment transferred enactment from the individual level to the group level.

The group underwent four iterative cycles while creating their norms before deciding on the strategic sustainability initiatives to pursue. Each cycle lasted approximately 10 minutes. The first normative discussion loop, focused on charity, took place from 00:50:08 to 01:03:00. The second loop, centred on personnel benefits, occurred from 01:03:00 to 01:11:00. The third loop, addressing diversity, extended from 01:11:00 to 01:22:00. The fourth normative discussion loop, related to decision-making norms, was initiated by the COO’s sensebreaking act in response to a highly tensioned sustainability initiative. This discussion took place from 01:25:00 to 01:32:00 and ended the enacting phase of collective sensemaking. The sensebreaking act led to a group discussion regarding the principles for selecting the most impactful initiatives. My interpretation was that this was the group's response to the managerial sensebreaking effort.

The length of the enactment phase in collective sensemaking may vary, as observed in the empirical research on the TMT’s collective sensemaking in hospitals conducted by Golden-Biddle (2020). Importantly, the enactment phase of collective sensemaking is intertwined with the actors’ practice world, as was evident in my case during the group discussion. The members of the group created various scenarios based on their experiences in the practice world, embracing the organisational context.

Figure 19. Actor 1 is asking Actor 8 to summarise what has been accomplished and decided upon at 01:32:00. This signals the beginning of a new phase of collective sensemaking. The group starts to reinterpret their work.

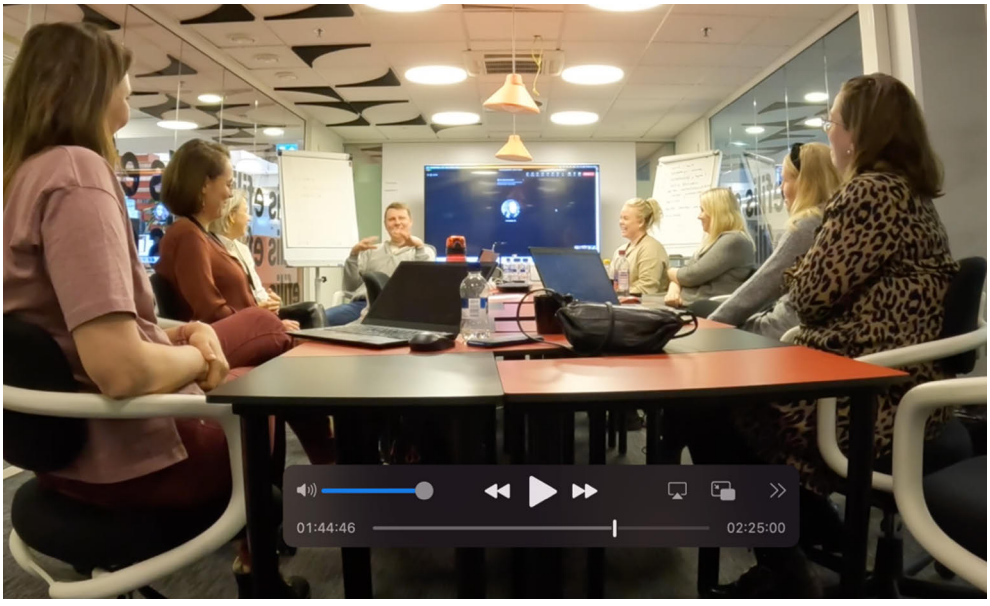

Figure 20. The normative loop is coming to an end, and the group members have reached a consensus on the selected sustainability initiatives at 01:44:46. Actors are smiling and nodding their heads, while Actor 1 verbalises, “It’s nice that we have something concrete to build upon”.

The reinterpreting phase of collective sensemaking began at 01:32:00, when Actor 8 started to summarise what the group had accomplished, as requested by Actor 1 (Figure 19). As Actor 8 summarised the group's work, the members nodded to each other and made minor adjustments to their shared understanding of the decisions made. Tensions lessened, and the open shoulders and relaxed torsos signalled a feeling of safety and calmness (Figure 20). This action was in line with the reinterpreting phase of sensemaking, which has been described as a phase in which the individuals or the group refine their understanding of the situation, making minor adjustments to their previous interpretations (Sandberg & Tsoukas, 2015, 2020; Weick et al., 2005).

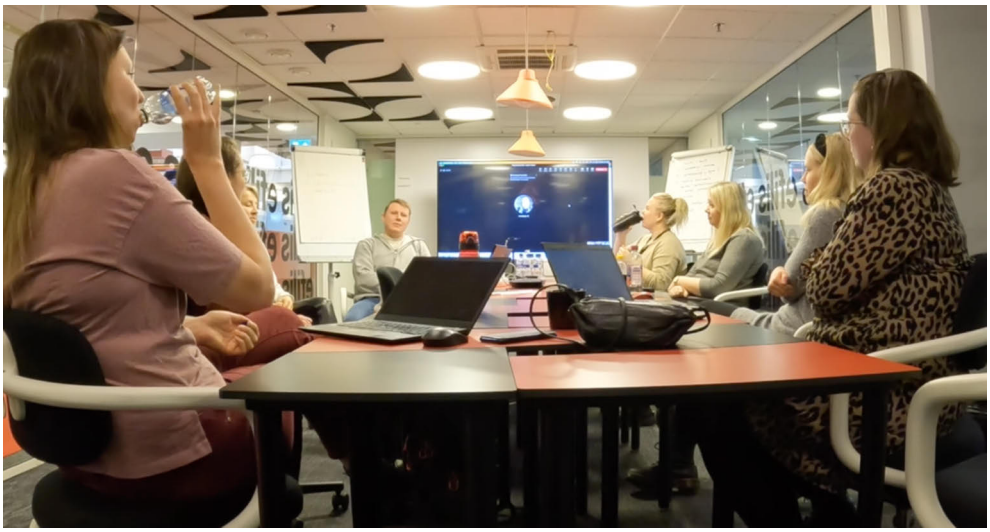

Figure 21. The reinterpreting phase of collective sensemaking is ending in silence at 01:45:00, and the embryonic group identity has developed. However, the group is not ready to face an external audience because the basic task is still unclear.

The first sequence of collective sensemaking and the phase of reinterpreting concluded at 01:45:00, and an embryonic group identity had developed (Figure 21). This interpretation was supported by the empirical results from the second workshop at 00:21:33 (see Figure 30) and from the third workshop at 00:10:06 (see Figure 40) as the group transitioned directly to the group-level retrospecting phase of collective sensemaking during the second and third workshops. In addition, the level of affective and normative commitment was already at a good level at the beginning of the second workshop, which further supports my interpretation of the empirical sign of embryonic group identity development. In other words, the empirical sign of developed embryonic group identity was seen as a behavioural act in which the group passed the individual level retrospective phase of collective sensemaking and went

directly into the group level retrospective phase of collective sensemaking during the second and third workshops. The individual level of the retrospective phase of collective sensemaking was absent from the second and third workshops.

However, the members of the group seemed to sense the emerging systemic power as Actor 8 summarised the group's work and articulated its relation to the external audience (Figure 19). However, the group did not fully establish its group relations with the external world and exhibited hesitation regarding group-level systemic power. I interpreted the sign of the embryonic group identity development as a moment of silence, where the bodies and voices of the actors were relaxed, and the group members were focused on each other. Nonetheless, the group was not yet prepared to face an external audience, and the fundamental task remained unclear. At 01:45:00, one of the members expressed, "It is really nice that we have something concrete to establish; however, we have to continue to work with these" (Figure 21). At this juncture, the principal researcher interrupted the group after they had indicated their readiness to proceed with the task of deciding on strategic change initiatives. As mentioned earlier in theoretical part of this study, it is important to recognize that social status of the group is produced by systemic power within the organization (Turner, 2005). In other words, the processual power of the group leads to its social status. Regarding the establishment of a group identity, systemic power, which is the outcome of authority and persuasive power processes, does not fully exist until the group identity formation has generated systemic power. Plausible identity stories through the use of representational sensemaking type in relation to the group were not fully developed and this further confirmed my interpretation in relation to underdeveloped systemic power in the group (Boje, 1995; Brown, 2004; Brown et al., 2015; Turner, 2005). Instead of fully developed systemic power and nascent group identity, the embryonic group identity had developed at 01:45:00 during repinterpreting phase of collective sensemaking.

After the first reinterpreting phase of collective sensemaking, the researchers organised a focus group interview with two smaller groups and initiated group interviews with an individual reflection task. The purpose of this individual task was to provide a short transition period and mitigate the potential impact of group dynamics before starting the focus group interviews. Individuals were asked to write down their thoughts about their experiences working together, specifically focusing on what they observed happening in the group, what surprised them and what difficulties they encountered during the group work. After a short period of individual reflection (10 minutes), the participants started working in small groups to discuss and reflect on what had occurred during the last hour and 45 minutes of work.

The small group interviews were partially recorded, and the researchers took notes during the discussions. The focus group interviews lasted approximately 20

minutes, with only a few minutes of difference between the small group interviews. The purpose of these focus group interviews was to gather data and guide group members in reflecting on their group work. The researchers recognised that this interview fostered group members' awareness of group dynamics, which could have had either a positive or negative impact on group identity creation (Farnsworth & Boon, 2010; Parker & Tritter, 2006; Stewart et al., 2023b). In other words, the focus group interview heightened the participants' awareness of both positive and negative feelings, influencing the group dynamics.

After the focus group interviews, the COO presented her thoughts about the group's basic mission and once again reviewed the targets and the drafted process for implementing the sustainability strategy. Following the COO's speech, the group did not engage in further discussion. At the end of the first workshop, the principal researcher assigned a task for the group to prepare for the next workshop. The task was to recognise significant stakeholders related to sustainability initiatives.

In conclusion, during the first workshop I observed that the group entered the next phase of collective sensemaking when all group members indicated that they were ready to proceed. The indications of readiness varied during different transitions but were related to the synchronisation of movements, coherence in gazes or verbal expressions that referred to the sensed or observed mental models of the group. These indications were later confirmed by the synchronisation of movements, coherence of gazes or vocalisations among group members, which might signal that the verification of group-level transition occurs through unconscious cognitive and emotional levels of processing. This observation aligns with Healey et al.'s (2015) concept of resonance between explicit conscious processes (C-systems) and implicit unconscious and emotional processes (X-systems), as well as the behavioural indicators of synchronisation described in studies by Giorgi (2017), Kouamé et al. (2022) and Ayers (2003). These studies offer additional support for the proposals I have made regarding the empirical signals of the synchronisation and transition phases of collective sensemaking, as described in the previous chapter. The utilisation of focused video ethnography enabled researchers to draw upon their field intuition, and the observed shifts in dynamics were in line with both theoretical and empirical evidence (Gylfe et al., 2016; Heath et al., 2023b). In summary, this chapter presents more detailed examples of the transitional phases of collective sensemaking in the process of group identity creation. For a comprehensive overview of the key empirical findings related to group identity creation during collective sensemaking, please refer to Table 3.

Table 3. Empirical Findings of Group Identity Creation during Collective Sensemaking at Workshop 1.

Affective commitment develops (00:00:00.1:45:00)	Model of Group Identity Creation First Sequence of Collective Sensemaking	Noticing (00–00:06:33)	Bracketing (00:06:33–00:17:09)	Retrospecting (00:17:09–00:23:17)	Enacting (00:23:17–1:32:00)	Reinterpreting (1:32:00–1:45:00)
	Emotional and unconscious cognitive resonance seeking (X-system) (00:00:00–00:17:09)	Individual Level Begins: Actors are engaged in various bodily movements and attempt to mimic each other (00:02:24). No significant eye contact is established among group members. Group Level Begins: Not observed. The noticing phase of collective sensemaking appears to occur at the individual level only.	Individual Level Begins: Actors are attempting to establish eye contact with each other (00:06:33). Group Level Begins: All group members have successfully established eye contact with Actor 8 (00:17:09).			
	Seeking explicit similarities and differences with stakeholders (C-system) (00:17:09–00:23:17)			Individual Level Begins: Actor 8 starts reflecting on her previous experiences and knowledge to make sense of her motives		

			for joining the sustainability working group (00:17:09). Group Level Begins: Actor 1 refers to the collective history of the group members in relation to the sustainability kick-off situation (00:23:12).	Not measured during first workshop	Not measured during first workshop	
	Affective commitment saturated to proceed to face resource scarcity	Not measured during first workshop	Not measured during first workshop	Not measured during first workshop		
	Facing resource scarcity and explicit mention about it (00:24:15)			Individual Level Begins: Actor 1 expresses his concerns about resource scarcity and observes the lack of sustainability knowledge, which might intensify workforce competition, and highlights the need for social support from the TMT (00:24:15). Group Level Begins: Tension grows, and three members of		

				the group raise their hands to emphasise their feelings of anxiety in the face of the unresolved group task and limited resources (00:47:02).		
	Model of Group Identity Creation First Sequence of Collective Sensemaking	Noticing (00–00:06:33)	Bracketing (00:06:33–00:17:09)	Retrospecting (00:17:09–00:23:17)	Enacting (00:23:17–1:32:00)	Reinterpreting (1:32:00–1:45:00)
Normative pre-commitment develops through iterative loops (00:23:17-1:45:00)	Assessing felt emotions and conscious and unconscious cognitive appraisal in situ	Excluded	Excluded	Excluded	Excluded	Excluded
	Producing persuasive and authority power by displaying emotions and engaging in cognitive speech acts (00:23:18–1:32:00)				Individual Level (00:23:17–00:55:28): Group members try to start dialogue and test different scenarios at an abstract level. Actor 1 is implicitly testing group values referring to past company-level actions at 00:23:18, displaying persuasive power. Persuasive power was displayed earlier	

				during the group identity creation at 00:23:17, coinciding with the beginning of the individual level enactment phase, and authoritative power was displayed later at 00:50:08 when Actor 6 referred to personnel suggestions made during the kick-off situation in April 2022. Group Level (00:55:28–01:32:00): The members of the group begin formulating identity claims related to appeals, such as "It is important that we (as a working group) can present plausible arguments for personnel" (00:55:28). This moment shifts enactment from the individual level to the group level. Actor 1 is asking Actor 8 to summarise what has been

					accomplished and decided upon at 01:32:00. This signals the beginning of a new phase of collective sensemaking. The group starts to reinterpret their work.	
	Sensing persuasive and authority power	Excluded	Excluded	Excluded	Excluded	Excluded
	Model of Group Identity Creation First Sequence of Collective Sensemaking	Noticing (00–00:06:33)	Bracketing (00:06:33–00:17:09)	Retrospecting (00:17:09–00:23:17)	Enacting (00:23:17–1:32:00)	Reinterpreting (1:32:00–1:45:00)
	Sensing systemic power as group property (01:32:00–01:45:00)	Not observed during the first workshop	Not observed during the first workshop	Not observed during the first workshop	Not observed during the first workshop	Individual Level Begins: Actor 1 is asking Actor 8 to summarise what has been accomplished and decided upon at 01:32:00. This signals the beginning of a new phase of collective sensemaking. The group starts to reinterpret their work, which continues until 01:45:00. Group Level Begins: Not recognised.

7.2 Second workshop as an arena for nascent group identity creation: Empirical findings and discussion

We followed the structure of the second workshop, as described in the chapter titled "The workshops as arenas for group identity creation", and outlined the turns and moments of collective sensemaking episodes that occurred during the process of group identity creation. Based on the theoretical proposition of collective sensemaking as an iterative and ongoing loop with ordered phases, I identified two sequences of collective sensemaking using the focus group analytical framework described earlier during the second workshop (Knoblauch & Tuma, 2023; Stewart et al., 2023a; Weick et al., 2005). These sequences encompass two episodes of collective sensemaking and two iterative cycles of group identity creation.

The first sequence of collective sensemaking during the second workshop lasted for one hour and 17 minutes (from 00:02:24 to 01:21:41). The second sequence of collective sensemaking spanned approximately 36 minutes (from 01:21:41 to 01:58:04).

Figure 22. Individual level of noticing phase begins at 00:02:24 after all the group members have assembled in the meeting room. Actors are engaged in various bodily movements and attempting to mimic each other. No significant eye contact is established among the group members.

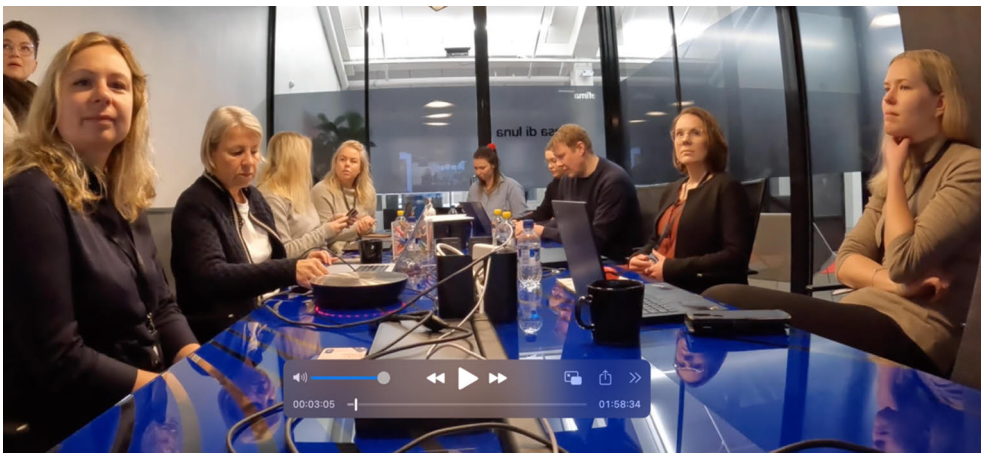

Figure 23. The individual level of the bracketing phase in collective sensemaking begins at 00:03:05 when Actor 1 establishes eye contact with Actor 2.

The second workshop commenced with a survey focused on measuring affective and normative commitment (Meyer & Herscovitch 2001). I began to observe the group's behaviour after the last actor in the group had settled into her seat at 00:02:24 see Figure 22. During the first workshop, I interpreted the lack of direct eye contact between group members as a signal that the noticing phase of collective sensemaking was ongoing. The lack of eye contact seemed to separate the noticing phase of collective sensemaking from the bracketing phase of collective sensemaking as proposed theoretically and written in the codebook. I based this assumption on the observation of a group dynamic shift between the absence of eye contact and the occurrence of first eye contact between dyads, described in more detail in the previous chapter. It is well known that eye contact plays a crucial role in establishing engagement and affiliation between actors (Ayers, 2003; Dikker et al., 2017; Gustafsson, R., 2023). Furthermore, my assumption aligns with sensemaking theory, which suggests that the bracketing phase of collective sensemaking begins when actors become more open to others during interaction (Sandberg & Tsoukas, 2015, 2020; Weick et al., 2005; Weick, 1995).

Interestingly, the second workshop followed the same order of phases as the first workshop in terms of group identity creation and collective sensemaking, and it appeared to restart the process from the noticing phase of collective sensemaking. During the noticing phase of the second collective sensemaking sequence, the group members displayed bodily signs of insecurity, such as self-touching, water drinking and adjusting their positions in relation to others without direct eye contact. I could not find any empirical evidence supporting the existence of a noticing phase at the group level.

During the second workshop, there was evidence of emotional and unconscious resonance seeking at the individual level, parallel with the noticing phase of collective sensemaking from 00:02:24 until the end of the workshop. Individuals occasionally displayed behaviour that could be interpreted as an unconscious attempt to seek resonance in dyads. For example, in moments of disagreement, individuals made body movements towards each other, and on one specific occasion, I observed oscillating body movements following an explicit confrontational disagreement (Figure 32). I interpreted that the oscillating body movement observed between dyads indicated successful resonance-seeking behaviour between X-systems (Hatfield et al., 1993; Healey et al., 2015; Kelly & Barsade, 2001; Kouamé & Liu, 2021; Kudesia & Elfenbein, 2013; Oatley et al., 2006). Thus, I was able to discover a more nuanced behavioural act that signalled an ongoing emotional sensemaking process between actors based on immanent sensemaking. Furthermore, the empirical evidence of this research supports the suggestion of sensemaking theory that immanent sensemaking is an ongoing process that never stops, unlike other sensemaking types that appear in phases and require different levels of awareness and conscious cognitive actions from C-systems. This is based on empirical evidence from this research and sensemaking theory (Maitlis & Sonenshein, 2010; Sandberg & Tsoukas, 2020; Weick et al., 2005; Weick, 1995).

However, to reactivate the iteration of cyclical collective sensemaking, this research proposes the existence of an underlying mechanism known as the group-level saturation point. This mechanism seems to be necessary to prevent minor individual-level noticing disturbances from causing disruptions at the group level and to ensure the continuous collective action of the group. The group-level saturation point facilitates the strengthening of emotional and unconscious resonance-seeking behaviours between individuals within the group. However, this may temporarily interrupt their ongoing group activities in the present moment. This mechanism serves as a protective buffer that helps maintain the coherence and continuity of group-level activities until the saturation point is reached.

If individuals express themselves with behavioural acts in the noticing phase, this may indicate a weakening of the emotional and unconscious resonance between X-systems within the group. They may actively seek to address and resolve these resonance issues within their dyads without necessarily disturbing the overall processes at the group level. This research suggest that the group-level saturation point helps maintain the coherence and continuity of group dynamics, even when individual-level noticing occurs. To initiate the group-level bracketing phase, it might be necessary for all individuals to simultaneously lose their emotional and unconscious resonance, as described above, which causes negative emotions due to a lack of psychological safety in situ (Fredrickson, 2001; Fredrickson et al., 2003; Fredrickson & Branigan, 2005).

Our proposition is supported by collective sensemaking research, which has shown that negative emotions are more effective than positive emotions in triggering collective sensemaking (Fredrickson & Branigan, 2005; Roberson, 2006). Negative emotions arise when a group faces collective challenges that hinder its ability to carry out basic tasks and fulfil its existential mission (Barsade, 2002; Roberson, 2006). Hence, the emotional and unconscious processes, which are based on the immanent sensemaking type, are regulating the group's attention and phase of collective sensemaking. One could further speculate that there are evolutionary explanations behind this mechanism, particularly related to the coherence and saturation of individuals' noticing phase of sensemaking and its effect on activating collective bracketing. This proposition of a group-level saturation point is also supported by my empirical findings in bracketing, retrospecting and enacting in collective sensemaking during the first workshop.

To reactivate collective sensemaking from its initial state and progress through all the phases again, there needs to be a simultaneous need and coherence at the individual level of the noticing phases to conclude the collective noticing phase and initiate the bracketing phase. I interpreted its conclusion when each actor had established coherent eye contact, indicating the beginning of the bracketing phase of collective sensemaking. This interpretation was based on research related to the meaning of gazes between individuals and the definition of different phases of sensemaking (Ayers, 2003; Dikker et al., 2017; Maitlis & Sonenshein, 2010; Sandberg & Tsoukas, 2015, 2020; Weick, K. E., 1995).

I interpreted that the individual-level bracketing phase commenced immediately after the first exchange of gazes among the actors at 00:03:05 during the second workshop (Figure 23). As argued theoretically in the previous chapter, the evolving bracketing phase began immediately after the first member of the group established eye contact with someone else. This interpretation is based on my understanding of sensemaking theory and theories related to the significance of gazes between individuals (Ayers, 2003; Dikker et al., 2017; Sandberg & Tsoukas, 2015, 2020; Weick et al., 2005; Weick, K. E., 1995). This moment occurred at 00:03:05, when Actor 1 made eye contact with Actor 2. This could be seen as a sign of opening himself with a more open mind in the situation (Ayers, 2003; Sandberg & Tsoukas, 2020; Weick et al., 2005). One member of the group joined the group for the first time during the second workshop. She had watched the recorded video of the first workshop before joining. This change in group composition affected group dynamics. I interpreted that the bracketing phase of collective sensemaking was delayed as a result (see Figure 24). The more nuanced dynamics of delay are described later in this chapter. Immediately after Actor 4 emphasised the importance of the group for the company's sustainability strategy implementation, the entire

group transitioned into the retrospecting phase of collective sensemaking at 00:21:33 (Figure 30).

The researcher of this study decided to conduct a survey on affective and normative commitment to verify the presence of commitment to the group during the process of group identity formation (Meyer & Herscovitch 2001). The survey was administered at the beginning of the workshop, when all group members had assembled in the meeting room, starting at 00:08:38 and concluding at 00:16:06. The principal researcher emphasised that the participants were allowed to step outside the meeting room to complete the survey to mitigate any potential tensions that could arise during the survey process. Following the completion of the survey, the principal researcher presented the workshop agenda, which is outlined in the chapter titled "The workshops as an arena for group identity creation". The survey results are presented in Appendix X.

We observed that affective and normative commitment were strengthened during the second workshop due to the progression in the group identity creation process.

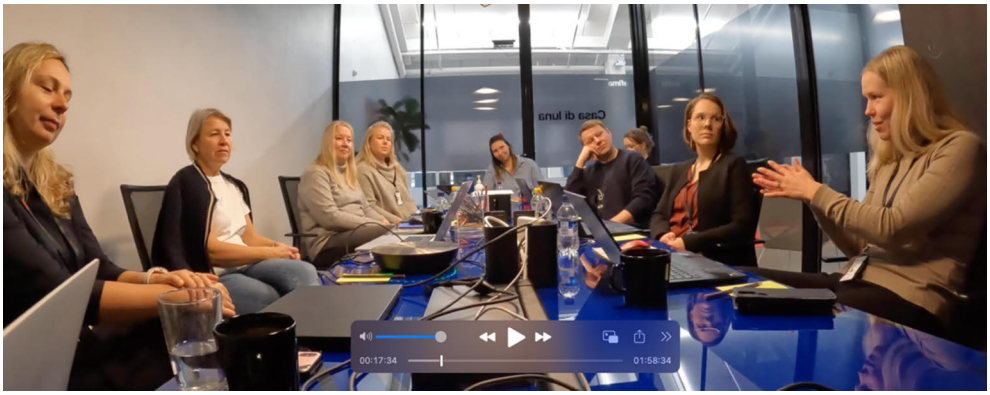

Figure 24. At 00:17:34: Members of the group who joined the first workshop are establishing emotional and unconscious resonance in the form of coherent eye contact. However, Actor 4 is an "outsider" until 00:21:33, when she confirms her acceptance of the group pre-norms developed during the first workshop. The woman in the corner is not a member of the working group.

Immediately after the survey was completed at 00:16:06, the group continued to display a high level of movement, indicating their intention to enhance emotional and unconscious cognitive resonance. This movement was similarly noticeable in the later stages of collective sensemaking in the second workshop and in the observations of the first workshop. The principal researcher recognised the need to support the group in transitioning from the evaluative state associated with the survey to the working mode of the working group. To facilitate this transition, the principal researcher encouraged the group members to acknowledge the shift in their

state from answering the survey to engaging in the work of the workshop. The researcher stated, “Now we may transfer our attention from answering the survey towards today’s workshop agenda... try to take a few breaths and shake your body a bit before we start working with the daily agenda” (00:16:10). After that, the principal researcher asked the members of the group to recall the last workshop and describe what happened in it, as well as the feelings that arose while remembering it.

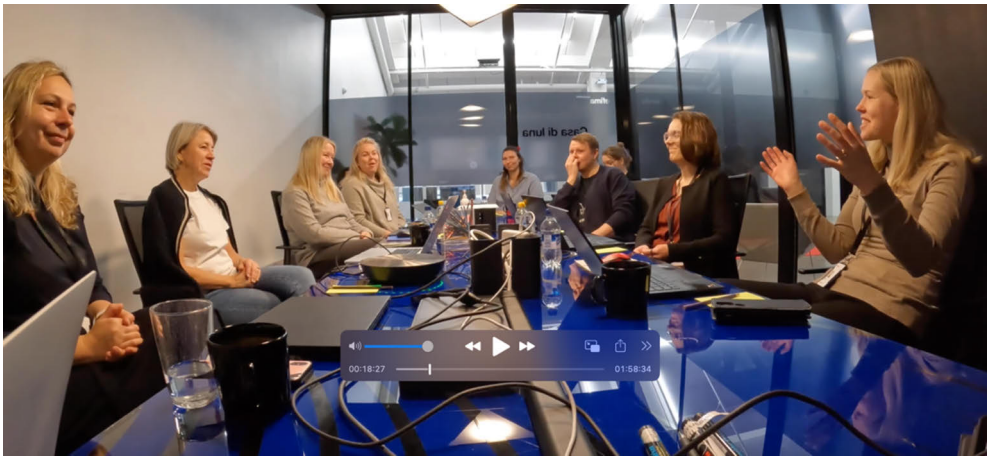

Figure 25. Actor 5 has just verbally confirmed Actor 1’s speech about the impossible mission and raises her hands while glancing at Actor 3, the leader of the group. The group is seeking emotional and unconscious resonance, and dialogue has not yet started at the cognitive level (00:18:27). The woman in the corner is not a member of the working group.

Figure 26. Actor 3 covers her torso after Actor 5’s confirmation of Actor 1’s “mission impossible”. The group is seeking emotional and unconscious resonance, and dialogue has not yet started at the cognitive level (00:18:28). The woman in the corner is not a member of the working group.

A facilitated discussion continued in which participants were asked to reflect on the last workshop and orient themselves towards the group work by sharing their thoughts on recognising significant stakeholders. During this discussion, one member of the group expressed their perspective, stating, "It feels that this task is almost impossible for us due to the various perspectives and stakeholders involved in sustainability. What can we realistically accomplish in practice with the given resources?" (00:18:00). Following this comment, Actor 5 verbally affirmed Actor 1's statement about the "mission impossible" and raised her hands while glancing at Actor 3, the leader of the group at 00:18:27 (Figure 25).

As a response, Actor 3 covered her torso, seemingly indicating a sense of vulnerability or challenge in the face of the "mission impossible" at 00:18:28 (Figure 26). These rhetorical acts were directed towards the notion of a group-level "mission impossible". Notably, there was a lack of individual-level references among all the members of the group who had joined the first workshop (i.e. "I"). In other words, the actors referred to their shared experience history using plural forms, which I interpreted as a sign that the group identity was already beginning to form among the members who participated in the first workshop and were identified as part of the working group. The members of the group utilised embryonic identity claims as a collective (Gioia et al., 2010). The arguments supporting this interpretation are presented later in this section. It is noticeable that the actor who was joining the working group for the first time sustained an outside perspective and referred to her private experience while watching the recording of the first workshop: "I agree that we must find a suitable level and scope of sustainability work in our company, as you were saying during the first workshop" (00:21:30). She did not share a common history with the group, and the recording was her only point of reference to the group discussion during the bracketing phase of collective sensemaking in relation to others.

Despite the challenges and the perception of a "mission impossible", the members of the group remained attuned to each other and maintained contact. They mitigated the pressure with laughter, but there was a noticeable lack of dialogue at the group level. At this point, the members did not engage in cognitive-level dialogue to seek explicit similarities and differences between the actors' C-systems (Barsade et al., 2000; Fredrickson & Branigan, 2005; Herrbach, 2006; Mercurio, 2015). At this point of group identity formation, the actors were seeking emotional and unconscious resonance between their X-systems, strengthening their affective and normative commitment to the group before allowing a new member of the group to join it. The results of the surveys confirmed that affective and normative commitment was strengthened during the second workshop, as shown in Appendix X.

During the second workshop, explicit mentions of group-level resource scarcity were expressed during the bracketing phase of collective sensemaking at 00:18:00. I interpreted this as an indication of a sufficient level of affective commitment felt

during the second iteration of group identity creation. However, it is important to recognise that based on the empirical results of this research, group identity creation is an iterative process, with earlier iterations providing a foundation for later ones. The results of the affective and normative commitment surveys support this interpretation, as the level of affective commitment was already strong prior to the second workshop and strengthened further during it (see Appendix X). There was a similar tendency in the third workshop (see Appendix X). This interpretation, linking the level of affective commitment to the emerging embryonic group identity, aligns with later empirical evidence from the second and third workshops, where the retrospecting phase of collective sensemaking differed from the first workshop in terms of the absence of individual rhetorical movements. In other words, the focus of the group members was on group-level retrospection and projection of discourse, and the lack of individual-level rhetorical acts was evident.

To relieve the pressure and encourage further exploration of emotions, the principal researcher intervened at 00:18:30 by asking Actor 1, "What kind of feelings do you experience when you describe the task as impossible?" Actor 1 responded with laughter and reiterated, "It feels impossible, but at the same time, it creates possibilities and feels challenging" (00:18:38). This statement sparked renewed emotional and unconscious cognitive resonance-seeking behaviours within the group, which were evident through their body movements, such as seeking oscillating movements (Figure 27, Figure 28 and Figure 29). The actors moved actively, displayed openness towards other members, and engaged in self-touching to create a calming effect on themselves and others, all while maintaining contact with one another.

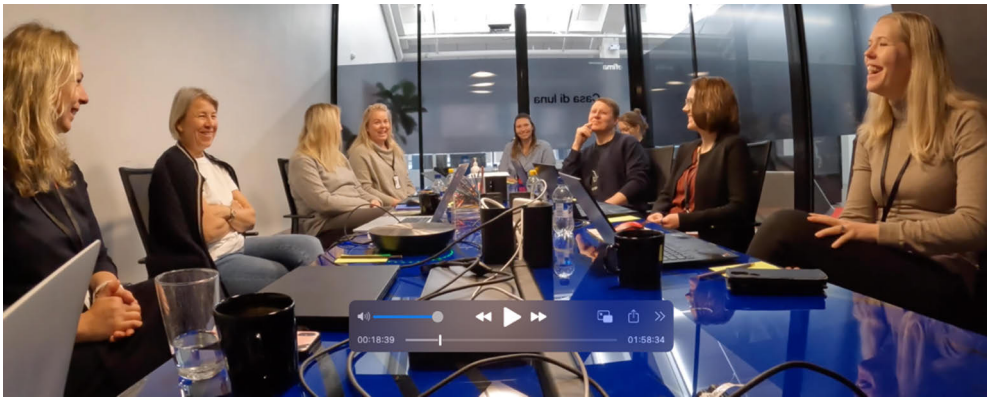

Figure 27. Actor 5 slides her hand towards her leg during self-touching, while Actor 4 glances at Actor 7, who has opened his collar area, keeping his hand in front of his chin. Actor 9 glances at Actor 5. The group is seeking emotional and unconscious resonance, and dialogue has not yet started at the cognitive level (18:39). The woman in the corner is not a member of the working group.

Figure 28. Actor 4 touches her face and makes eye contact with Actor 5. Actor 3 smiles at Actor 5. Actors 9 and 2 smile at Actor 1, who has just described her feelings about the “mission impossible”. The group is seeking emotional and unconscious resonance, and dialogue has not yet started at the cognitive level (18:40). Group-level coherent eye contact is still missing. The woman in the corner is not a member of the working group.

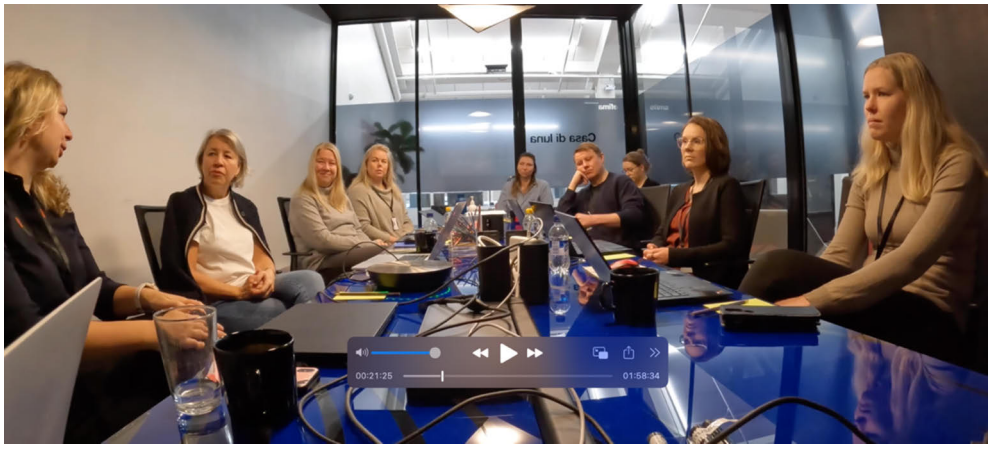

Figure 29. The bracketing phase of collective sensemaking is progressing and the individuals are giving hints of their current state of mind and body at the individual level (00:21:25). Actor 7 is the only one who has not made eye contact with Actor 4, who joined the group during the second workshop. Actors are seeking emotional and unconscious resonance during the gradually evolving bracketing phase of collective sensemaking. The woman in the corner is not a member of the working group.

Figure 30. The group-level bracketing phase of collective sensemaking is beginning, and all actors have established coherent eye contact with Actor 4 at the same time, which occurs at 00:21:33. Just before the group's coherent eye contact, Actor 4 verbally confirms her agreement with the group discussion that took place during the first workshop (00:21:30). Actor 4 verbally confirms acceptance of the embryonic norms of the group developed during the first workshop. The woman in the corner is not a member of the working group.

Group-level emotional and unconscious resonance seeking occurred from 00:06:33 to 00:21:33, parallel with the group-level bracketing phase of collective sensemaking, when all group members aligned their gazes and established coherent eye contact with Actor 4 (Figure 30). It is notable that Actor 4 verbally confirmed her acceptance of the embryonic norms developed by the group during the first workshop a few seconds earlier, at 00:21:30. The coherent eye contact occurred immediately after that moment. The results of the survey confirmed that group-level affective and normative commitment had already formed and strengthened during the first workshop (Appendix X). However, it appeared that the group-level emotional and unconscious resonance was unable to reach its saturation point unless the new member of the group explicitly confirmed her acceptance of the pre-established norms developed by the working group during the first workshop.

I therefore propose that the group protects its embryonic group identity from outsiders by requiring explicit agreement with group norms, confirmed in the case of this research by opening the torso and looking towards the group, before allowing new members to join (see Figure 30). The group applicant first had to verbally confirm her commitment to the group, and only then would the group allow her to join the group emotionally.

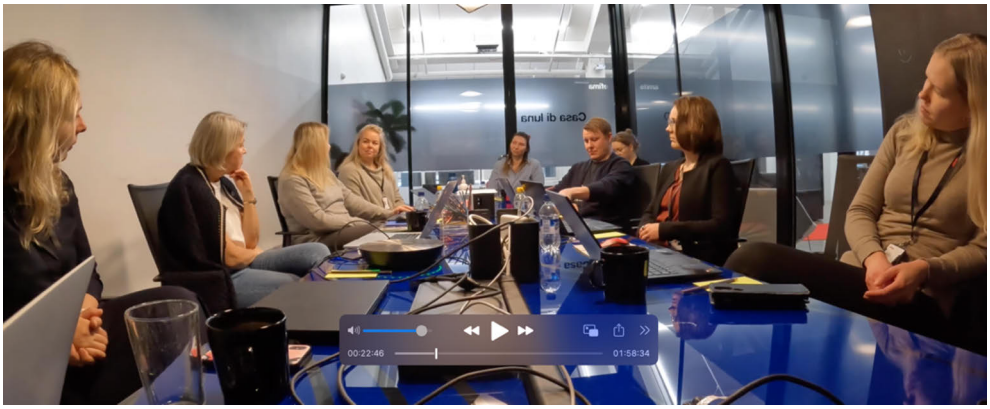

Figure 31. The first verbalised difference between group members during group-level retrospecting sensemaking at 22:46. The woman in the corner is not a member of the working group.

Figure 32. Actors 1 and 2 are oscillating with body movements after recognising the differences during group-level retrospective sensemaking at 23:10. Prior to this signal, Actor 2 moved her body several times towards Actor 1. The woman in the corner is not a member of the working group.

The group-level retrospecting phase in collective sensemaking began at 00:22:22, when Actor 1 referred to the previous workshop and initiated a discussion on various aspects of sustainability work. This action prompted the group members to reflect on the similarities and differences in their preconceptions, which they had developed during and after the first workshop (Figure 31). It is noticeable that the individual level was absent during the second workshop, and the actors focused on reflecting their shared history, created during and after the first workshop, until the group reached the moment where the enactment phase was activated. This phase strengthened and developed the embryonic group identity towards a nascent group identity, in line with the suggestions of SCT theory with the metacontrast principle

and similarity attraction effects (Abrams & Hogg, 1990; Elfenbein, 2014; Ellemers et al., 1999).

The mention of resource scarcity occurred at 00:18:00 during the individual level of the bracketing phase, indicating that the concept was already deeply embedded in the group's collective memory. This suggests that the group members had internalised the concept of resource scarcity, and that it had become a significant aspect of their shared understanding and awareness. Furthermore, the level of affective and normative commitment was strong enough to sustain its expression as a regulative act right from the beginning of the workshop, even before the second iteration round of collective-level bracketing during group identity creation. This highlights the profound impact of resource scarcity on the group's dynamics and decision-making processes, shaping the group's collective identity and guiding the group members' behavioural acts (Turner, 2005). It is noteworthy that our theoretical model did not initially address group identity creation in its later cycles, but based on empirical evidence, I realised that group identity creation required multiple iteration cycles (Kuusisto & Mäkinen, 2023).

Moreover, the realisation of resource scarcity occurred during the first workshop, and the group members referred to the same attributions of resources as in the initial workshop. This indicates continuity in their understanding and perception of resource scarcity, further contributing to the development and maintenance of their shared group identity.

Figure 33. The enactment phase of collective sensemaking is beginning. Actor 3 engages in dialogue to test her scenarios and ideas about charity work in the company at 00:31:55.

At the beginning of the enactment phase, the group started discussing charity work in response to the principal researcher's question about their thoughts on the

chosen sustainability initiatives from the previous workshop. Actor 3 initiated a phase of enactment in collective sensemaking by stating, "This is a really problematic issue, and we should consider the multiple meanings of charity work and how we are going to define it in relation to our stakeholders... Moreover, we need to clarify our practical actions within our company" (see Figure 33). This discussion created an unresolved situation within the group, and it appeared that the group was waiting for someone to step up and take leadership to shift the discussion in a new direction. The group expressed a desire to shift towards a task-oriented approach with a practical focus rather than continuing with a retrospective discussion.

It is important to note that enactment is closely intertwined with the actor's practical concerns rather than abstract concepts (Maitlis et al., 2013; Weick, 1993). This was evident during the group discussion, which focused on practical world issues from the beginning of the enactment phase. This empirical evidence signalled the group's transition to the next phase of collective sensemaking. The group bypassed the individual level of the enactment phase and immediately shifted to the collective level, as they did during the retrospecting phase of collective sensemaking in the second workshop. As mentioned earlier, this could be interpreted as an indication of an already established group identity, as the group members began using identity claims in the plural form from the start of the enactment phase (i.e. "we").

The principal researcher interrupted the group discussion about charity work at 00:47:41 and gave the group a task: to redefine their chosen initiatives, establish more accurate and measurable sustainability targets and plan how to monitor the progress of these objectives over the next year within their organisation. The researchers then left the meeting room, providing the group with the opportunity to work on the task independently. It is noticeable that the group started the enactment first, and the principal researcher facilitated the group discussion afterwards, noting the group's natural progression and willingness from the retrospecting phase of collective sensemaking towards the enactment phase.

The group discussed two different topics of sustainability initiatives, trying to clarify the strategic targets for the next financial year. Additionally, they started to define how to measure and facilitate implementation in the company. Members of the group signalled acts of persuasive and authoritative power and went through three iterative loops of normative discussion related to sustainability initiatives. According to Turner (2005), persuasive power is a "function of group identity and consensus" (p. 10), so every situation faced is evaluated in relation to the core defining characteristics of the group, such as its norms or values. The term "persuasive" originally comes from self-categorisation theory (SCT), where persuasive action is "the collective attempt by a group to develop a consensual

response to a stimulus situation" to continue acting (Turner, 2005). Authoritative power refers to the influence and control exerted by an individual or entity based on their recognized position, expertise, or official role within a particular context or organization. This type of power is often associated with formal leadership positions, titles, or roles that grant the person a level of legitimacy and the right to make decisions, give orders, and direct the actions of others (Turner, 2005). Therefore, the interpretation of the observed behavioural acts are in line with SCT. The first loop of discussion took 15 minutes, the second took 10 minutes and the third took 10 minutes. The leader of the group cut off the discussion related to a highly sensitive sustainability issue using her authoritative power, which is why the fourth iterative loop of discussion was shorter than the others, lasting only 4 minutes.

The researchers were able to hear the discussion from the other room, and they entered the room after the group signalled that they were ready to demonstrate their work to the researchers at 01:17:41. The leader of the group closed the discussion by stating, "Now we have reached a good level of practice" (01:17:41). This statement ended the phase of collective enactment. The principal researcher asked the group to present their work briefly, and the leader of the group took on the role of presenter while other members of the group made minor adjustments to her speech, signalling that the group had entered the phase of collective reinterpreting (01:18:08–01:21:41). The group then signalled a willingness to take a break, and the researchers decided to provide a three-minute break, ending at 01:24:41. This break ended the second sequence of collective sensemaking.

Figure 34. Group-level bracketing begins when the principal researcher initiates a group task, and all members of the group direct their attention and eyes towards her at 01:25:05. The purpose of the group task was to facilitate the enactment phase by delving into practical considerations. This is achieved through the technique of cognitive materialisation, in which the group members visually represent the process step by step, utilising space and visualisation techniques.

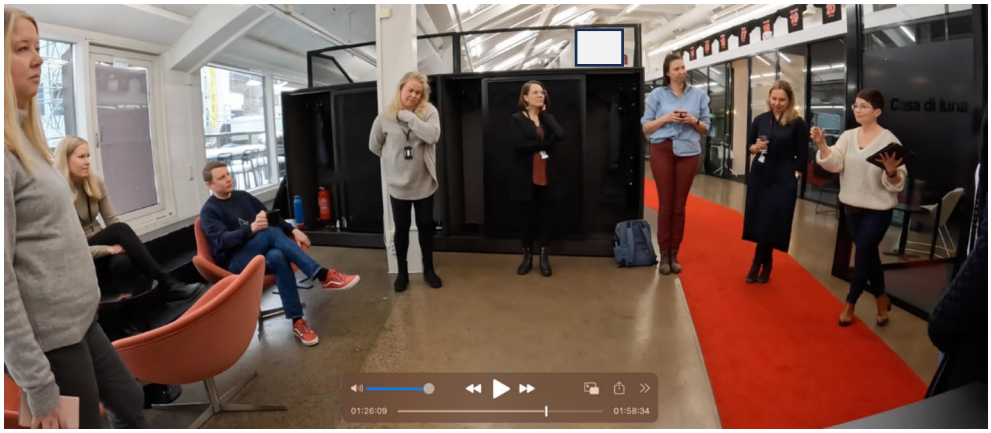

Figure 35. The group-level retrospecting phase begins at 01:26:09, when the principal researcher references the group work that was completed just before the break.

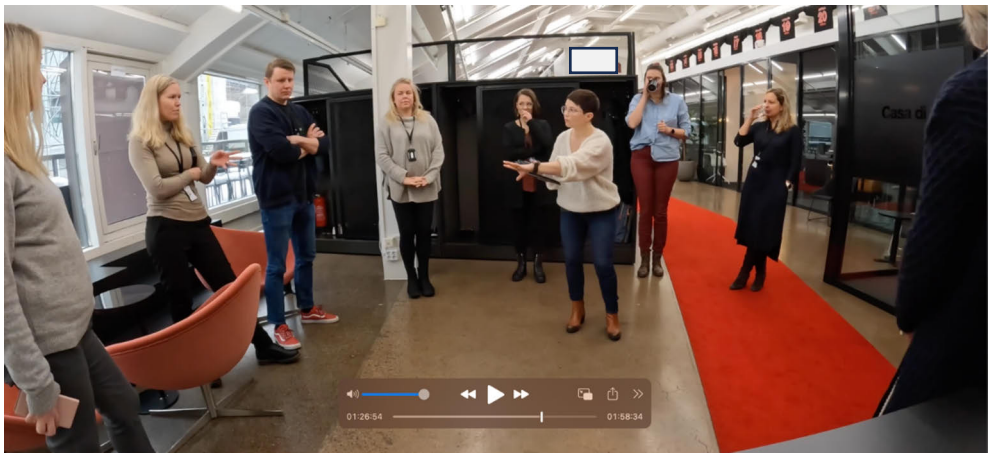

Figure 36. Group-level enactment begins at 01:26:54 when Actor 2 proposes a future scenario in the form of a question related to the process of “doing good” in the company in response to the principal researcher’s task description.

Figure 37. The group is finalising their work and the reinterpreting phase ends at 01:50:34.

During the group discussion described above, the researchers reflected on the group discussion and decided, as planned before the second workshop, to guide the group deeper into the practicalities based on the experiences from the first workshop. The group had already signalled a willingness to clarify the impact of its decisions in the world of practice during the first workshop, so the researchers decided to utilise the technique of cognitive materialisation, where the members of the group were asked to draw the process of "doing good" in a company with an imaginary character by utilising space and visualisation techniques (Kaplan, 2011; Orlikowski, 2007; Stigliani & Ravasi, 2012).

Group-level bracketing begun when the principal researcher initiated a group task, and all members of the group direct their attention and eyes towards her at 01:25:05 (Figure 34). The purpose of the group task was to facilitate the enactment phase by delving into practical considerations. The instructions were given, and the group worked independently from 01:27:16 until 01:48:35 (Figure 35 and Figure 36). At 01:48:35, the principal researcher interrupted the group work and asked the members to present the process from the viewpoint of the employees. The group presented its work signalling ongoing reinterpreting phase (see Figure 37), and at 01:50:39, the principal researcher asked the group to prepare for the next workshop by clarifying the role of the sustainability working group and the process of managing sustainability work in practice in relation to different stakeholders.

The phases of collective sensemaking were identified during the third iteration of group identity creation: the noticing phase occurred at 01:22:00 and continued until the end of the sequence, group-level bracketing occurred at 01:25:05–01:26:07, group-level retrospecting occurred at 01:26:07–01:26:54, the group-level enactment

phase occurred at 01:26:54-01:48:35, and the individual-level reinterpreting phase occurred at 01:48:35–01:50:39. It is noteworthy that the group-level reinterpreting phase was not recognised, which can be attributed to the absence of a nascent group identity (Turner, 2005). This absence was detected through the observation of the lack of typical behavioural signals associated with group identity, such as expressive and coherent identity claims that no longer require individual-level adjustments.

In organisational research, it has been found that the presence of coherent identity claims often indicates that a group has reached a stage of readiness to confidently present itself to an external audience (Boje, 1995; Brown, 2004; Brown et al., 2015; Giorgi, 2017; Sandberg & Tsoukas, 2020; Turner, 2005). By recognising the absence of these behavioural signals, it became evident that the group had not yet formed a solidified and unified identity that would empower them to present themselves with confidence to external stakeholders during the second workshop. Without the presence of coherent and expressive identity claims, the group's collective identity had not reached the level of maturity and coherence necessary for external presentations. This indicated that further development and refinement were required for the group to establish a clear and unified identity that could be effectively communicated to external audiences.

The time was strictly limited, and the members of the working group felt time pressure during this specific group task. This was designed beforehand, and the researchers aimed to enhance group dynamics at the moment when embryonic group identity had already developed, as described in the previous chapter. For clarity, the results of the second iteration are presented in a more nuanced manner in Table 4. However, I excluded the presentation of the third iteration during the second workshop to focus solely on the findings and insights from the second iteration. In this table, I have also compiled the developed understanding of the meaning of behavioural acts during group identity creation and collective sensemaking.

Table 4. Empirical Findings of Group Identity Creation during Collective Sensemaking at Workshop 2.

	Model of Group Identity Creation Second Sequence of Collective Sensemaking	Noticing (00:02:24–end of workshop)	Bracketing (00:03:05–00:21:33)	Retrospecting (00:21:33–00:31:55)	Enacting (00:31:55–01:17:41)	Reinterpreting (01:18:08-01:21:41)
Affective commitment develops (00:02:24-01:21:41)	Emotional and unconscious cognitive resonance seeking (X-system) (00:02:24–00:21:33)	Individual Level Begins: Actors are engaged in various bodily movements and attempt to mimic each other. No significant eye contact is established among the group members. Group Level Begins: Not observed. The noticing phase of collective sensemaking appears to occur at the individual level only. Individual-level noticing is an ongoing process.	Individual Level Begins: Actors are attempting to establish coherent eye contact with each other (00:03:05). Bracketing phase of collective sensemaking is established at 00:03:05 when Actor 1 makes eye contact with Actor 2. Group Level Begins: All group members have successfully established coherent and timely eye contact with Actor 4, who has verbally confirmed her acceptance of the group's developed pre-norms			

			(00:21:33). It is notable that the members of the group who participated in the first workshop had already formed groups and established coherent eye contact with Actor 5 at 00:17:34. Thus, the bracketing phase of collective sensemaking was delayed due to the changed group composition.			
	Model of Group Identity Creation Second Sequence of Collective Sensemaking	Noticing (00:02:24–end of workshop)	Bracketing (00:03:05–00:21:33)	Retrospecting (00:21:33–00:31:55)	Enacting (00:31:55–01:17:41)	Reinterpreting (01:18:08-01:21:41)
	Seeking explicit similarities and differences with stakeholders (C-system) (00:21:33–00:31:55)			Individual Level Begins: Not observed. The group seemed to jump right into group-level retrospecting. Group Level: Actor 4 explicitly expressed similarity related to the sustainability		

				working group by emphasising her acceptance of work done in the last workshop and the pre-norms developed in it at 00:21:33.		
	Affective commitment saturated to proceed to face resource scarcity	Results presented in Appendix X	Results presented in Appendix X	Results presented in Appendix X	Results presented in Appendix X	Results presented in Appendix X
	Facing resource scarcity and explicit mention about it (00:17:27)			Individual Level Begins: Actor 5 expresses his concerns about resource scarcity and observes the lack of resources, leading her to explicitly explain that she is not able to include everything she would like to have in the sustainability work of the company (00:17:27). Group Level Begins: Group members immediately confirm Actor 1's explicit mention of "limited time available" (00:18:00).		

	Model of Group Identity Creation Second Sequence of Collective Sensemaking	Noticing (00:02:24–end of workshop)	Bracketing (00:03:05–00:21:33)	Retrospecting (00:21:33–00:31:55)	Enacting (00:31:55–01:17:41)	Reinterpreting (01:18:08-01:21:41)
Normative pre-commitment develops through iterative loops (00:31:55–01:21:41)	Assessing felt emotions and conscious and unconscious cognitive appraisal in situ	Excluded	Excluded	Excluded	Excluded	Excluded
	Producing persuasive and authoritative power by displaying emotions and engaging in cognitive speech acts (00:31:55–01:17:41)				Individual Level Begins: Not observed. The group seems to jump right into the group level of enactment. Group Level Begins (00:31:55) The entire group engages in dialogue and tests different scenarios at an abstract level in response to Actor 3's implicit question of how to border and set the scope for sustainability work doings (00:31:55).	

	Sensing persuasive and authority power	Excluded	Excluded	Excluded	Excluded	Excluded
	Sensing systemic power as group property (01:18:08–01:21:41)					Individual Level Begins (01:18:08): The principal researcher asks the group to present their work briefly. The leader takes on the role of presenter, while other members make minor adjustments to her speech, signalling that the group entered the phase of collective reinterpreting at the individual level. The group starts to reinterpret their work and continues to do so until 01:21:41. Group Level Begins: Not recognised.

7.3 Third workshop as an arena for nascent group identity creation: Empirical findings and discussion

The third workshop confirmed my results regarding the iterative nature of group identity creation. This sequence consisted of one episode of collective sensemaking and one iterative cycle of group identity creation. The third workshop commenced with a survey designed to measure affective and normative commitment following the protocol established in the second workshop (Meyer & Parfyonova, 2010). The survey results are presented in Appendix X. Group transitioned into working group mode at 00:54:43 and focused primarily on developing an action plan with an established adult group identity. I excluded the following episode of collective sensemaking from the data analysis, given the scope of this research.

Additionally, I will provide a shorter description of the third workshop compared to the previous two workshops, as the third workshop served to validate the dynamics observed in the iterative cycles of group identity creation from the previous workshops.

As shown in Appendix X, the level of affective and normative commitment was higher than at the beginning of the second workshop, and it was elevated during the third workshop, signalling strengthened group identity.

Figure 38. The individual level of bracketing in collective sensemaking is initiated when Actor 6 attempts to establish eye contact with Actor 3 at 00:06:41.

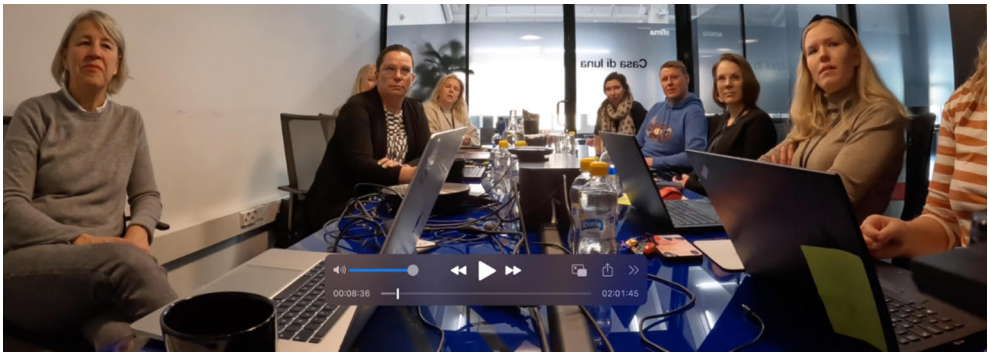

Figure 39. The individual-level bracketing phase transitions into the group-level bracketing phase in collective sensemaking at 00:08:36, when the group members establish coherent eye contact with Actor 5.

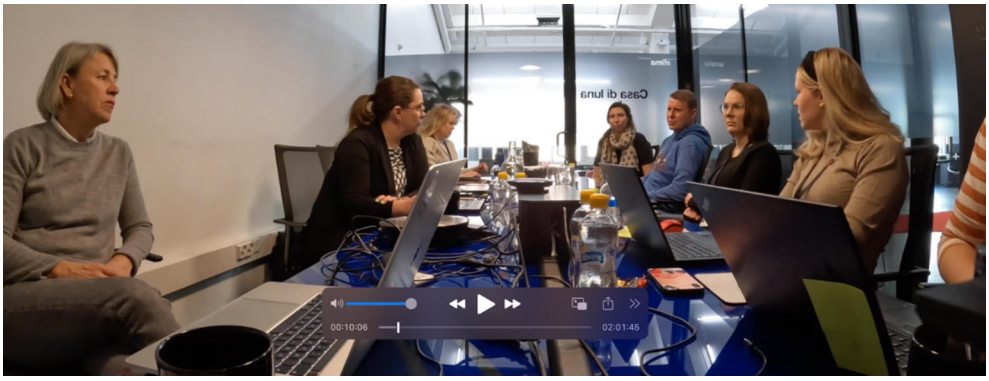

Figure 40. Collective level of retrospecting sensemaking starts at 00:10:06, when the actor prompts a question: "I am not sure how we handled the environmental questions last time?"

All phases of the presented theoretical model of group identity creation were observed in the dynamics of the third workshop during the fourth iteration of group identity creation and collective sensemaking. The process began with the noticing phase of collective sensemaking from 00:06:04 to 00:06:41. The individual level of bracketing in collective sensemaking was initiated when Actor 6 attempted to establish eye contact with Actor 3 at 00:06:41 (Figure 38). The collective level was reached at 00:08:36, when all group members established coherent eye contact with Actor 5 (Figure 39). The principal researcher prompted a task for the group after noticing the moment of coherent eye contact, and the researcher stepped out of the meeting room. Participants were asked to redefine the sustainability initiatives chosen in the last workshop and set measurable targets for them. The group level of retrospecting sensemaking began immediately after the given group task at 00:10:06, when an actor raised a question: "I'm not sure how we handled the environmental questions last time?" see Figure 40. This lasted until 00:13:47.

Like the second workshop, the individual level of retrospecting was absent, which I interpreted as a sign of an already formed embryonic group identity. In other words, individual-level retrospecting occurs during the very early stages of group identity creation but not in subsequent iterations after the embryonic group identity has formed. The dynamics of the third workshop reaffirmed our earlier interpretations of the theoretical model of group identity creation (Kuusisto & Mäkinen, 2023). Additionally, the results of affective and normative commitment during the third workshop indicated a strengthened group identity (Appendix X). The survey results demonstrated the progressive strengthening of the group identity.

Figure 41. The individual level of reinterpreting phase in collective sensemaking is underway, as Actor 1 describes what the group has decided (00:49:28). Other members are making minor adjustments to Actor 1's speech.

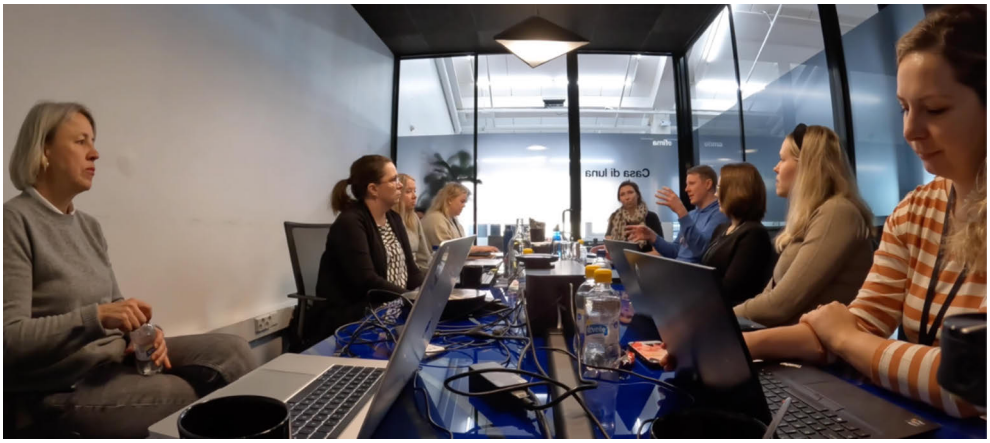

Figure 42. The moment of nascent group identity formation during the group-level reinterpreting phase of collective sensemaking. Actor 8 confirms Actor 2's statement, stating, "Everything is ready now. We may make some minor adjustments, but we are prepared" (00:55:13).

The group-level enactment phase began at 00:13:47 and lasted until 00:48:09. It included three discussive iterative loops, each taking approximately ten minutes, focused on the creation of pre-norms. As anticipated, the individual level was absent, given the formation of the embryonic group identity during the first iterative loop of collective sensemaking. The individual-level reinterpreting phase of collective sensemaking took place from 00:48:41 until 00:54:43 see Figure 41. Following the initial episode of collective sensemaking, the principal researcher prompted the group members to reflect on their discussion. Actor 2 expressed, "We have just made a clear plan to execute" (00:54:43), indicating that the group identity had reached a level of maturity capable of withstanding criticism from external audiences. Actor 8 confirmed Actor 2's statement, stating, "Everything is ready now. We may make some minor adjustments, but we are prepared" (at 00:55:13, see Figure 42). Hence, the nascent group identity of the sustainability working group was formed through four episodes of collective sensemaking, following the phases of our proposed theoretical model and validating it empirically (Kuusisto & Mäkinen, 2023).

Table 5. Empirical Findings of Group Identity Creation during Collective Sensemaking at Workshop 3.

Affective commitment saturation development (00:06:04-00:13:47)	Model of Group Identity Creation Third Sequence of Collective Sensemaking	Noticing (00:06:04–end of workshop)	Bracketing (00:06:41–00:08:36)	Retrospecting (00:10:06–00:13:47)	Enacting (00:13:47–00:48:09)	Reinterpreting (00:48:41–00:54:43)
	Emotional and unconscious cognitive resonance seeking (X-system) (00:06:04–00:08:36)	Individual Level Begins: Actors are engaged in various bodily movements and attempt to mimic each other. No significant eye contact is established among the group members. Group Level Begins: Not observed. The noticing phase of collective sensemaking appears to occur at the individual level only. Individual-level noticing is an ongoing process.	Individual Level Begins: Actors are attempting to establish coherent eye contact with each other (00:06:41). The individual level of bracketing in collective sensemaking is initiated when Actor 6 attempts to establish eye contact with Actor 3 at 00:06:41. Group Level Begins: The individual-level bracketing phase transitions into the group-level bracketing phase in collective sensemaking at 00:08:36, when the group members establish coherent eye contact with Actor 5.			

	Seeking explicit similarities and differences with stakeholders (C-system) (00:10:06–00:13:47)			Individual Level Begins: Not observed. The group seems to jump right into group-level retrospecting. Group Level: The group level of retrospecting sensemaking begins at 00:10:06 and lasts until 00:13:47, when Actor 7 raises a question: “I am not sure how we handled the environmental questions last time?”		
	Affective commitment saturated to proceed to face resource scarcity	Results presented in Appendix X	Results presented in Appendix X	Results presented in Appendix X	Results presented in Appendix X	Results presented in Appendix X
	Facing resource scarcity (00:14:00)			Individual Level Begins: Not observed. Group Level Begins: Actor 4 answers Actor 8’s question regarding the decision-making principles and power structures in the		

				sustainability working group in relation to the company's other structures at 00:14:00. Actor 8 then verbalises her thoughts about decision-making possibilities and principles, indirectly raising resource scarcity in the group's awareness.		
Normative pre-commitment develops through iterative loops (00:13:47–00:54:43)	Assessing felt emotions and conscious and unconscious cognitive appraisal in situ	Excluded	Excluded	Excluded	Excluded	Excluded
	Producing persuasive and authoritative power by displaying emotions and engaging in cognitive speech acts				Individual Level Begins: Not observed. The group seems to jump right into the group level of enactment. The entire group engages in dialogue and tests different scenarios at an abstract level in response to Actor 8's question regarding the decision-making	

					principle in the sustainability working group in relation to the company's other structures (00:13:47).	
	Sensing persuasive and authoritative power	Excluded	Excluded	Excluded	Excluded	Excluded
	Sensing systemic power as a group property	Not observed during the third workshop	Not observed during the third workshop	Not observed during the third workshop	Not observed during the third workshop	Individual Level Begins 00:48:41: Actor 1 asks the principal researcher to summarise what has been accomplished and decided. The group starts to reinterpret their work by making minor adjustments until the end of the discussion. Group Level Begins: Actor 8 confirms Actor 2's statement, stating, "Everything is ready now. We may make some minor adjustments, but we are prepared" (00:55:13). The moment of nascent group identity has appeared.

8 Conclusions

The main goal of this study was to discover the process of sustainability working group identity creation during its early stages. I strived to achieve this objective by combining existing research to identify the theoretical stages of working group identity formation, and complementing this with empirical research (Graebner et al., 2012). I discovered that the dynamics of group identity creation can be divided evolutionary into two stages: the development of the embryonic group identity and the formation of the nascent group identity. These stages involve multiple normative discussion loops through which the group engages in iterative discussions and exchanges to shape its identity. The process continues until the group reaches a point where it can sense systemic power and establish a mature, an adult, group identity.

During the first iterative loop of group identity creation and collective sensemaking sequence, the different phases of collective sensemaking emerged from the noticing phase and progressed gradually through the transitional phases. During these transitional phases, all members of the group processed the next phase of sensemaking at their own pace. The progress of the group's sensemaking in its early stages appeared to depend on the individual actors' advancement. They could not move on to the next phase until all members were ready to do so. Therefore, group-level sensemaking in the early stages of group identity creation (i.e. first iterative loop) required transitional phases, during which some group members might have been ready to enter the next phase but could not do so because the entire group was not. However, the empirical evidence of this research identifies specific moments when the next group-level sensemaking phase begins and the previous transitional phase ends. Interestingly, after the first iterative loop of collective sensemaking and group identity creation, an interesting change occurred in the dynamics of group identity formation. The group had already established a shared history, which seemed to influence the subsequent processes of identity creation. Following the retrospective phase of collective sensemaking, the group transitioned directly to the group level, bypassing the progressive emergence of individual-level sensemaking.

Furthermore, I focused on exploring the mechanism of identification in relation to unconscious cognitive and emotional processes (X-system) as well as conscious cognitive processes (C-system) during group identity creation. Since identification

is necessary for commitment to act on behalf of the group, it could be seen as a necessary practical step in group identity formation for group identity to exist (Bergami & Bagozzi, 2000; Van Der Vegt & Bunderson, 2005). Empirical evidence validated that unconscious cognitive and emotional processes (X-system) were initially activated in a sequential manner during group identity creation in relation to conscious cognitive processes (C-system) during the first (00–00:06:33), the second (00:02:24–00:21:33) and the third (00:06:04-00:08:36) workshops as proposed in sensemaking theory presented by Sandberg & Tsoukas, (2020). According to the empirical evidence presented in this research, the group immediately began to seek emotional and unconscious cognitive resonance through immanent sensemaking as soon as they entered the meeting room to develop a contextual sense (see Table 3, Table 4 and Table 5). The empirical evidence of this study supports the suggestion of sensemaking theory that immanent sensemaking is an ongoing process, hence individuals displayed behavioural signs in which they mirrored bodily movements and refreshed unconscious cognitive and emotional resonance in dyads during group identity creation (Sandberg & Tsoukas, 2020). However, these single actions could not move the whole group into another evolutionary stage (i.e. they could not stop the group's evolutionary process as single and unsaturated actions). Seeking emotional and unconscious cognitive resonance, the actors performed different body movements while trying to mimic each other during group identity creation (Elfenbein, 2014; Hatfield et al., 1993). They continued these behavioural acts until the moment when the first actor in the dyad attempted to make eye contact (see Table 3, Table 4 and Table 5).

This research proposes, based on empirical evidence, that the first attempt to establish eye contact within the group is the moment when the involved-deliberate sensemaking type is activated and the noticing phase of collective sensemaking gradually begins to evolve into the bracketing phase of collective sensemaking (see Table 3, Table 4 and Table 5). In addition, the bracketing phase of collective sensemaking is activated by the activation of the involved-deliberate sensemaking type until the moment when all group members have made coherent eye contact with an actor, as described in the coding instructions in the Codebook of Collective Sensemaking in Group Identity Creation (see Table 6). The moment of coherent eye contact in group identity creation is the moment when the group shifts to seeking conscious cognitive resonance and conscious development of meaning through retrospecting phase of collective sensemaking (Gioia et al., 2010; Giorgi, 2017; Gustafsson, R., 2023; Gylfe et al., 2016; Sandberg & Tsoukas, 2020). This is consistent with SCT and its metacontrast principle, which suggests that actors seek explicit similarities and differences during the self-categorisation process (Abrams & Hogg, 1990, 2017; Elfenbein, 2014; Kouamé et al., 2022; Sandberg & Tsoukas, 2020). Based on the empirical evidence in this research, the conscious cognitive

processes (C-system) were activated in a sequential manner after the activation of the unconscious cognitive and emotional processes (X-system) during the first (00:17:09–00:23:17), second (00:21:33–00:31:55 and 01:22:00–01:26:07) and third (00:10:06–00:13:47) workshops, as proposed in our modified model of group identity creation (Kuusisto & Mäkinen, 2023). This was seen as a behavioural act in which the actors started to verbalise explicit similarities and differences with another group member or outgroups during retrospecting phase of collective sensemaking (see Table 3, Table 4 and Table 5).

By integrating the theoretical constructs of simultaneous identification and group identity creation through collective sensemaking, I have improved our understanding of the underlying mechanisms, particularly in relation to unconscious cognitive and emotional processes (X-processes) and conscious cognitive processes (C-processes) (Healey et al., 2015; Herrbach, 2006; Meyer & Allen, 1991; Meyer & Herscovitch, 2001; Somers, 2009). Furthermore, the empirical findings of this research confirm the suggestions of Meyer and Parfyonova (2010) that normative and affective commitment should be considered as separate concepts. I have identified and highlighted the importance of maintaining these two constructs as distinct entities, as they were found to be connected to different stages of collective sensemaking during group identity formation. Specifically, the development of affective commitment appeared to be associated with the noticing, bracketing, retrospecting, enacting, and reinterpreting phases of collective sensemaking during the first (00:00:00.1:45:00), second (00:02:24-01:21:41), and third (00:06:04-00:54:43) workshops, as proposed in the modified model of group identity creation of this research (see Figure 3). According to the empirical results of this research, the individual-level noticing phase and the ongoing immanent sensemaking type acted as a continuous mechanism to construct and reconstruct affective commitment during group identity creation.

In addition, normative commitment was linked to the enactment and reinterpretation phase of collective sensemaking during the first (00:23:17-1:45:00), second (00:31:55-01:21:41 and 01:26:07-01:50:39) and third (00:13:47-00:54:43) workshops, as proposed in this research's modified model of group identity creation (see Figure 3). Based on empirical evidence, normative commitment began to develop gradually after the group recognised and explicitly mentioned resource scarcity during the first (00:24:15), second (00:17:27) and third (00:14:00) workshops. Furthermore, in the modified model of group identity creation, I outlined the different patterns of group behaviour associated with affective and normative commitment during the process of group identity creation (see Figure 3).

This research made contributions in three different areas. First, I further developed from existing research and empirically discovered a model of group identity creation based on the previous work of Kuusisto & Mäkinen, 2023. I made

contributions to organisational identity research, specifically in the area of group identity creation. Second, I advanced sensemaking theory, particularly in collective sensemaking research. Through this study, I have identified and acknowledged different types of sensemaking that emerge in a specific order in relation to different collective sensemaking phases during the process of group identity creation (Sandberg & Tsoukas, 2020). As a result, I contributed to the core of sensemaking research, which focuses on revealing the phenomena of organizing, including the specific place, time and order of every organisational issue within the organisational system (Maitlis, 2005; Sandberg & Tsoukas, 2011, 2015; Weick et al., 2005; Weick, 1995). The actors in this research endeavoured to make sense of their organisational environment and actively worked towards creating a more ordered world during working group identity creation (Maitlis, 2005; Maitlis & Christianson, 2014). They achieved this by engaging in emotional and cognitive resonance-seeking behaviour through their unconscious cognitive and emotional processes and cognitive processes, allowing them to satisfy their socioemotional needs aligned with organisational sustainability strategy targets (Aguinis & Glavas, 2019; Giorgi, 2017; Healey et al., 2015). Hence, the findings of this research expand the existing knowledge on collective sensemaking and its mechanism for creating group identities. Third, this research made methodological contributions to collective sensemaking and group identity research by creating and empirically testing a codebook. The Codebook of Collective Sensemaking and Group Identity Creation has the potential to open up new research avenues for content analysis for other organisational scholars (Guest et al., 2023).

Overall, this research contributes to the advancement of knowledge in group identity creation and group dynamics, sensemaking theory and the methodology related to group identity and collective sensemaking research. These contributions expand the existing knowledge in these areas and provide valuable insights for both researchers and practitioners in organisational studies. Next, I will provide a more nuanced conclusion regarding my contributions to the three distinct areas of research.

8.1 Model of group identity creation

The workshops provided an arena for group identity creation. As the group worked together to define their mission, clarify the meaning of sustainability in the company's context, make decisions about the sustainability initiatives and create a detailed roadmap for the sustainability strategy, they began to form a shared sense of purpose and values, which was measured by commitment surveys (Meyer & Herscovitch, 2001). This shared sense of identity was reinforced through the focus group interviews, in which group members reflected on their interactions and experiences during the workshop.

An embryonic group identity was formed during the first episode of collective sensemaking in the first workshop. However, it took four subsequent episodes of collective sensemaking to establish a sense of systemic power that could effectively withstand external pressure from the audience (Boje, 1995; Brown et al., 2015; Giorgi, 2017; Sandberg & Tsoukas, 2020; Turner, 2005). The differences between the first and the remaining iterative cycles were related to the dynamics of collective sensemaking at the individual and group levels. The first cycle of group identity formation involved a clear mechanism in which the saturation and coherence of individual-level sensemaking were required to activate group-level sensemaking. Instead, the second (00:21:33) and subsequent cycles (01:26:09 and 00:10:06) jumped immediately from the retrospecting phase to the group level in collective sensemaking, which I interpreted as a sign that embryonic group identity was already existing, as individuals reflected on past experiences through group identity rather than personal identity.

Based on empirical findings in this study, there exists an underlying mechanism, which I have termed the group-level saturation point, that is required to activate group-level attention. This mechanism seems to be necessary to prevent minor dysfunctions at the individual level from causing dysfunctions at the group level and to ensure the group's continuous collective action, as described above. In other words, the group level saturation point must be reached before the group can move on to the next phase of collective sensemaking during group identity creation. The mechanism of the group level saturation point is probably related to the individual level noticing act through immanent sensemaking type during the group identity creation (Sandberg & Tsoukas, 2020). This mechanism serves as a protective buffer that helps maintain the coherence and continuity of group level activities until the saturation point is reached.

At the beginning of my empirical journey, I was not certain what the empirical signal might be when the group recognises systemic power as it existed. The literature on organisational identity has found that clear identity claims signal organisational-level identity maturity during organisational identity formation (Corley & Gioia, 2004b; Gioia et al., 2010). I based the empirical signal of mature group identity on previous organisational-level identity research and SCT findings, as well as sensemaking types' appearance during the group identity creation (Abrams & Hogg, 1990, 2017; Corley & Gioia, 2004a; Ellemers et al., 1999; Gioia, 1998; Sandberg & Tsoukas, 2020; Turner, 2005; Turner et al., 1987). However, I was able to detect a clear signal, in line with theoretical proposal of this research, when the group members verbally indicated that they were ready for an external audience during the third workshop at 00:55:13. This moment confirmed the propositions of my theoretical model (see Figure 43).

In conclusion, I empirically identified the eight stages of group identity formation during collective sensemaking, as proposed theoretically in the modified model of group identity creation (see Figure 3 and Figure 43).

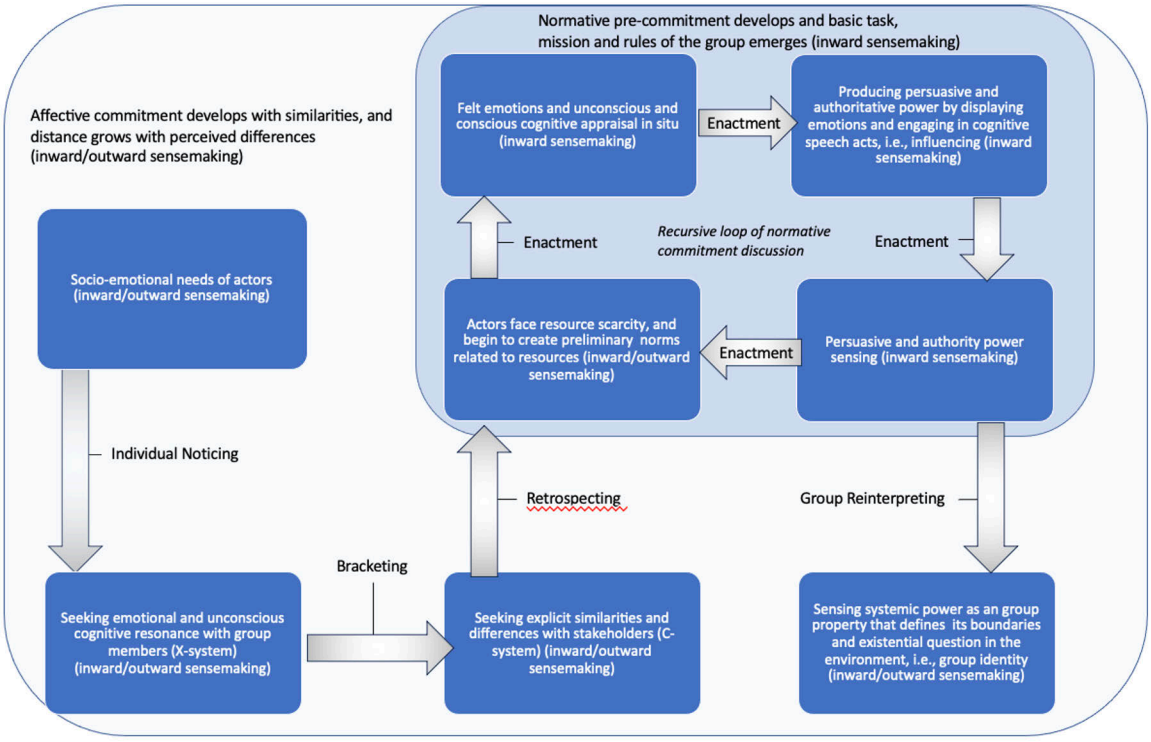

Figure 43. Model of group identity creation during collective sensemaking. Modified from Kuusisto & Mäkinen (2023).

8.2 The gradual emergence of sensemaking types during group identity creation

Through empirical research, I observed how actors engaged in verbal and non-verbal interactions during the early stages of group identity formation. I was able to empirically validate the theoretical assumption regarding the profound role of immanent sensemaking in the creation of group identity, especially in moments when actors tried to re-establish emotional and unconscious resonance with each other through their X-systems, see for example Figure 32 with oscillating movements (Gersick & Hackman, 1990; Giorgi, 2017; Healey et al., 2015; Sandberg & Tsoukas, 2020). Mimicry, oscillating body movements and eye contact played important roles in the behaviour of seeking emotional and unconscious resonance through immanent sensemaking (Giorgi, 2017; Kouamé et al., 2022; Kouamé & Liu,

2021; Kudesia & Elfenbein, 2013). As previously demonstrated, I found that the immanent sensemaking type has a saturation mechanism that restarts the cycle of group identity creation from the noticing phase to the reinterpreting phase of collective sensemaking, as well as buffers the group from minor individual-level disturbances.

Interestingly, the involved-deliberate sensemaking type was dominant when actors discovered similarities and differences in a new context through their X-systems, and the detached-deliberate sensemaking type was dominant when actors discovered similarities and differences through their C-systems and when the normative discursive loop developed and actors' conceptual sense developed. Furthermore, the retrospective sensemaking type was dominant when the actors started to feel a spectatorial sense about their group work in the moments of reinterpreting the collective work. The spectatorial sense seemed to be related to systemic power formation during group identity creation, and it might be necessary to ensure actors' engagement in sustainability implementation work.

Overall, the theoretical model of group identity creation follows Sandberg and Tsoukas' (2020) sensemaking types as an gradual process (see Figure 43). It is noticeable that immanent sensemaking is an ongoing activity at the individual level and seems to act as a regulative mechanism in collective sensemaking, as described above. The phases of group identity creation are aligned with the emergence of different types of sensemaking as follows:

1. In the early stages of group identity creation, emotional and unconscious resonance seeking occurs through immanent and involved-deliberative sensemaking between actors' X-systems (Giorgi, 2017; Healey et al., 2015; Sandberg & Tsoukas, 2020). This process helps establish a contextual sense for the group (Beyes et al., 2022; Sandberg & Tsoukas, 2020).

2. As the group identity develops, the implicit and explicit seeking of resonance takes place mainly through involved-deliberative and detached-deliberative sensemaking (Giorgi, 2017; Healey et al., 2015; Sandberg & Tsoukas, 2020). It is noteworthy that involved-deliberative sensemaking appeared before detached-deliberative sensemaking, which appeared when actors explicitly identified similarities and differences. The existence of these types of sensemaking leads to the formation of reinforcing contextual and conceptual senses that facilitate the development of affective commitment among group members as they detect similarities and differences (Abrams & Hogg, 1990; Elfenbein, 2014; Ellemers et al., 1999). Affective commitment involves the sensing of otherness, which clarifies ingroup boundaries and enhances ingroup bonding (De Luca Picione & Valsiner, 2017; Oliver, 2015; Sandberg & Tsoukas, 2020). This stage also increases awareness of resource scarcity

due to the growing contextual and conceptual sense of group members, which increases their willingness to take action in the sociomaterial world of practice to ensure optimal resource utilisation (Bergami & Bagozzi, 2000; Herrbach, 2006; Somers, 2009; Turner, 2005).

3. A recursive loop of normative discussion emerges, mainly driven by detached-deliberative sensemaking as actors reflect on their past discourse, values and future scenarios (Sandberg & Tsoukas, 2020). However, involved-deliberative sensemaking is present in moments of disagreement, when actors cope with the continuation of contextual sense and try to maintain it in parallel with group cohesion. During this phase, actors engage in the creation of persuasive and authoritative power as they shape the norms and behaviours of the group (Brown, 2004; Sandberg & Tsoukas, 2020; Schildt et al., 2005).

4. The reinterpretation phase of collective sensemaking is dominated by representational sensemaking. In this phase, actors reduce ambiguity by discovering plausible identity stories and authoring their own experiences (Corley & Gioia, 2004a; Gioia et al., 2010). This process leads to the development of the group's nascent group identity and the perception of embryonic systemic power in the face of an organisational audience (Boje, 1995; Brown, 2004; Brown et al., 2015; Sandberg & Tsoukas, 2020; Turner, 2005).

8.3 Codebook: Methodological insights into group identity creation during collective sensemaking

I created the codebook in Table 6 based on SCT, sensemaking theory and more specific to sensemaking types in relation to intra- and intergroup relations during group identity creation (Ellemers et al., 1999; Mackie & Smith, 2017; Sandberg & Tsoukas, 2020). The theoretical definitions in my codebook are following Braun and Clarke's (2021) suggestions from video ethnography, as described in the chapter: Data Analysis. Additionally, I followed Knoblauch and Tuma's (2023) suggestions of analysing sequences of video data based on actors' sensemaking episodes and reflexivity, in which the actors contextualise and coordinate acting in certain sociomaterial space. The five phases of the sensemaking episode from sensemaking theory were integrated into the codebook (see Table 2) and tested empirically, following the findings of Sandberg and Tsoukas (2020) in relation to sensemaking types. The codebook acted as the core guidance for my data analysis. The final codebook (see Table 6) was created based on the theoretical development of a modified model of group identity creation following Braun and Clarke's (2021) "codebook approach" in TA (Kuusisto & Mäkinen, 2023).

The integration of affective and more autonomous processes with cognitive processes during group identity creation was based on Healey et al.'s (2015) conceptual underpinnings of unconscious cognitive and emotional X-systems and conscious cognitive C-system functioning among team members and Sandberg and Tsoukas' (2020) sensemaking types. Healey et al. (2015) recognised the importance of intertwined reflexive and reflective processes among individuals in the context of team functioning. Furthermore, the literature on organisational identity widely acknowledged that collective sensemaking acts as a tool for identity work and called for more empirical research on the integration of identity and sensemaking research streams. I was pleased to undertake this challenge and was able to empirically validate and extend the theoretical suggestions of previous scholars.

Table 6. Codebook of Collective Sensemaking in Group Identity Creation.

Phase of collective sensemaking	Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
Noticing	Sociomaterial needs	Sociomaterial needs refer to the needs of individuals or groups for material or social resources, such as tools, social status, safety or recognition (Orlikowski, 2007; Turner, 2005).	In the context of group identity creation, sociomaterial needs can be seen in interactions between people when individuals or groups seek to satisfy their material or social needs through the creation of a group identity. **For example:** During a workshop, participants may express their need for certain resources, such as time, money, or equipment, which are necessary for their work or activities that ultimately satisfy their socioemotional needs. **Pay attention:** During group identity creation, it is important to be aware of these driving needs as they create tensions and conflicts of interest between group members. However, more specific knowledge related to needs is not necessary to observe the phenomenon of group identity formation.
Noticing gradually evolving bracketing	Seeking emotional and unconscious cognitive resonance with group members (X-system)	Emotional resonance seeking is based on similarity-attraction effects (Abrams & Hogg, 1990; Barsade et al., 2000; Giorgi, 2017; Healey et al., 2015; Hodgkinson & Healey, 2011). It is well known that the actors are trying to seek a bridge between cognitive and experiential dissonance by seeking reinforcement for their feelings, attitudes or thoughts in relation to others and the world around them (Barsade et al., 2000; Hodgkinson & Healey, 2011).	Primitive mimicry occurs unconsciously based on our socioemotional need to belong to the group (Elfenbein, 2014; Hatfield et al., 1993). It is based on the ability to imitate primitive facial expressions, vocalisations and bodily expressions (Hatfield et al., 1993). Observing body movements activates certain emotions that are recognised by the receiver of the emotion, who immediately and automatically reinforces or inhibits the sender's original emotion, leading to withdrawal or approach in situ (Hatfield et al., 1993).

Phase of collective sensemaking	Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
			For example: People synchronize their movements and mirror each other's bodily gesture. They raise their hands simultaneously or grab a glass of water at the same time, turn towards the same direction to observe something, and adapt their vocal tone to match one another. Such behaviour demonstrates a certain level of alignment. **Pay attention:** Note the synchronisation of movement and vocalisation in a group as a result of mimicry. Note the coherence of eye contact between group members (Dikker et al., 2017; Gustafsson, R., 2023). Observe how the coherence of eye contact between the members of the group develops, paying attention to the moments when the first eye contact is established between the dyads. Note the moment when each actor looks in the same direction. This signals the moment when emotional resonance is reached in the group.
Bracketing and gradually evolving retrospecting	Seeking explicit similarities and differences with group members (C-system)	The primary mechanism of emotional contagion is primitive mimicry, which leads to mechanism of social comparison according to self-categorisation theory (Elfenbein, 2014; Hatfield et al., 1993). The mechanism of social comparison is partly driven by the metacontrast principle, which leads actors to seek explicit similarities and differences (Abrams & Hogg, 1990, 2017; Elfenbein,	The metacontrast principle leads group members to minimise ingroup differences and maximise outgroup differences to clarify the boundaries of the embryonic group, leading to increasing tensions with perceived outgroups (Abrams & Hogg, 1990). The researchers used the survey to measure the level of affective and normative commitment as pre- and post-measures to verify the processual development of commitment during group identity creation (Elfenbein, 2014; Meyer et al., 2002; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010).

Phase of collective sensemaking	Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
		2014; Kouamé et al., 2022; Sandberg & Tsoukas, 2020). Affective commitment is sensed and felt through our sensory system based on emotional resonance (Elfenbein, 2014; Giorgi, 2017; Herrbach, 2006; Kouamé et al., 2022). Affective commitment develops towards those with perceived similarities, for example, related to values, attitudes, behavioural acts, cognitive mental models or beliefs (Barsade et al., 2000; Elfenbein, 2014).	The levels of affective and normative commitment are measured to verify their progression during group identity creation, using a well-documented survey of workplace commitment developed by Meyer and Herscovitch (2001). The results of the survey are shown in Appendix X. **For example:** Group members may emphasise differences between their own group and other groups while minimising differences within their own group. They may use language, symbols or rituals to reinforce their shared identity and distinguish themselves from other groups. They may also engage in stereotyping or prejudice against members of other groups based on perceived differences. **Pay attention**: Note the first moment when someone begins to share similarities with another group member. This moment indicates that affective commitment is strong enough to clarify outgroup differences. Note the first moment when someone verbalises outgroup differences. This moment indicates that the metacontrast principle is activated and that the group has identified outgroup differences. **Measure**: Use the survey to measure the level of affective and normative commitment as pre- and post-measures to verify the processual development of commitment during group identity creation (Elfenbein, 2014; Meyer et al., 2002; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010).

Phase of collective sensemaking	Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
Retrospecting and gradually evolving enactment	Facing resource scarcity	Turner (2005) highlighted the significance of power as a contextual element in the process of group formation. According to Turner, the dynamics of a group during its formation can be explained by the presence of resource scarcity and how actors respond to it.	Power is closely linked to resource scarcity, which is a fundamental aspect of human life. Both socioemotional and material resources are inevitably scarce in any human interaction. **For example:** People refer to lack of top management support, lack of time, knowledge, personnel, competing priorities or budget to execute their mission. **Pay attention:** Note the moment when the discourse begins in relation to the perception of resource scarcity in a group. Note whether the actors perceive resource scarcity through their personal identity or through their group identity.
Enactment and gradually evolving reinterpreting	Assessing felt emotions and conscious and unconscious cognitive appraisals in situ	Normative pre-commitment evokes felt emotions and cognitive appraisal, leading to actors influencing others through cognitive speech acts and displayed emotions that affect group dynamics.	Given the scope of my research, I excluded the coding of empirical evidence here. The focus is not on the emotions felt by the actors but on the strengthening and weakening of embodied cues associated with positive or negative emotions during evolving group-level sensemaking in the formation patterns and stages of the group identity formation process (Gonzaga et al., 2001). Furthermore, the focus is not on intra-individual phenomena but on group-level phenomena created by participants in situ (Smith & Mackie, 2015).
Enactment and gradually evolving reinterpreting	Producing persuasive and authoritative power by displaying	Persuasive power is related to the actor's social skills, emotional intelligence and ability to negotiate with others on the important issue of the group's existence	Resource awareness is present when someone is producing persuasive and authoritative power.

Phase of collective sensemaking	Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
	emotions and engaging in cognitive speech acts	(i.e. identity). It is highly visible when group members disagree with each other. According to Turner (2005), persuasive power is a “function of group identity and consensus” (p. 10), so every situation faced is evaluated in relation to the core defining characteristics of the group, such as its norms or values. The term “persuasive” originally comes from self-categorisation theory (SCT), where persuasive action is “the collective attempt by a group to develop a consensual response to a stimulus situation” to continue acting (Turner, 2005). Authoritative power refers to the influence and control exerted by an individual or entity based on their recognized position, expertise, or official role within a particular context or organization. This type of power is often associated with formal leadership positions, titles, or roles that grant the person a level of legitimacy and the right to make decisions, give orders, and direct the actions of others (Turner, 2005).	**For example:** A manager exercises authority power by making decisions that align with the company's goals and strategies, and their subordinates are expected to follow those decisions. In a team setting, a leader uses persuasive power to inspire and motivate team members, encouraging them to contribute their best efforts toward a common goal. **Pay attention:** Note the moment of disagreement in relation to important issues of group existence or resource utilization. Asynchronous body movements may occur. Note the moments when identity claims move from the individual to the group level (i.e. from “I” to “we”). Remember that emotional control mechanisms can be manifested through the non-verbal communication of group members, such as silence in response to a joyful suggestion or adjusting one’s body position in relation to the person speaking (Gylfe et al., 2016).
Enactment and gradually evolving reinterpreting	Sensing persuasive and authoritative power	Persuasive power is related to the actor’s social skills, emotional intelligence and ability to negotiate with others on the important issue of the group’s existence (i.e. identity). It is highly visible when	Given the scope of my research, I excluded the empirical evidence coded here.

Phase of collective sensemaking	Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
		group members disagree with each other. According to Turner (2005), persuasive power is a "function of group identity and consensus" (p. 10), so every situation faced is evaluated in relation to the core defining characteristics of the group, such as its norms or values. The term "persuasive" originally comes from self-categorisation theory (SCT), where persuasive action is "the collective attempt by a group to develop a consensual response to a stimulus situation" to continue acting (Turner, 2005). Authoritative power refers to the influence and control exerted by an individual or entity based on their recognized position, expertise, or official role within a particular context or organization. This type of power is often associated with formal leadership positions, titles, or roles that grant the person a level of legitimacy and the right to make decisions, give orders, and direct the actions of others (Turner, 2005).	
Reinterpreting	Sensing systemic power as a group property	Practical logic is formed through organizational history and cultural identity formation in relation to the organisational systemic environment (Bacharach et al., 1996; Sandberg & Tsoukas, 2011; Schein, 2010).	Nascent group identity develops from embryonic group identity to the moment of adult group identity. The end of the normative discussion and the expression of readiness to face the outgroup signals that the group has developed a nascent group identity, which supports the implementation of the group's basic mission in a given organisational system.

Phase of collective sensemaking	Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
		Turner (2005) proposed in his three-process theory of power that power is produced during group formation and is closely related to the identity issues of the group, which ultimately affect the systemic power in a particular organizational system.	The researchers decided to use the survey to measure the level of affective and normative commitment as a pre- and post-measure to examine the processual development of commitment during the creation of group identity (Elfenbein, 2014; Meyer et al., 2002; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010). **For example:** The group exhibits a strong sense of togetherness and solidarity. Members feel connected to one another and show support for each other both inside and outside the group. The group has well-defined goals and objectives that members are enthusiastic about achieving collectively. They work collaboratively towards these goals. They may express a strong commitment to these shared ideals. **Pay attention:** Embryonic group identity could be detected as a moment of silence, where the bodies and voices of the actors were relaxed, and the group members were focused/attuned on each other. Nonetheless, the group is not yet prepared to face an external audience, and the fundamental task remains unclear. “It is really nice that we have something concrete to establish; however, we have to continue to work with these”. Notice the readiness to present core identity claims to external audiences, such as the TMT, in the form of explicit speech acts (Boje, 1995; Brown, 2004; Brown et al., 2015; Giorgi, 2017; Sandberg & Tsoukas, 2020; Turner, 2005).

Phase of collective sensemaking	Coding Categories of Group Identity Creation (Pre-Codes)	Definition	Coding Instructions
			The group shows signs of strengthened group self-esteem by demonstrating readiness to present its core existential identity claims to outgroups. **Measure**: The survey is used to measure the level of affective and normative commitment as pre- and post-measures to verify the processual development of commitment during group identity creation (Elfenbein, 2014; Meyer et al., 2002; Meyer & Herscovitch, 2001; Meyer & Parfyonova, 2010).

9 Future research avenues and limitations of the research

This was a focused ethnographic study with an abductive logic see Figure 44. It was concerned with a complex group process, for which it drew on the rich and extensive prevailing theory in the sensemaking and organizational identity literature to integrate theoretical constructs into analysis (Gehman et al., 2018; Langley, 1999; Langley et al., 2013). Throughout the research project, the researcher engaged in a continuous dialogue between theory and empirical material. Additionally, the primary researcher actively reflected on her own biases in consultation with the senior researcher who accompanied her in the field (Gylfe et al., 2016; Knoblauch & Tuma, 2023; Pink & Morgan, 2013; Sormani, 2023). The empirical material served as both a source of inspiration and a dialogue partner, encouraging critical thinking and complementing theoretical understanding of the process of group identity creation through collective sensemaking (Alvesson & Kärreman, 2007; Graebner et al., 2012).

In qualitative process research, plausibility goes beyond empirical accuracy, and this challenges researchers to keep empirical material in mind to create logical and internally coherent research (Langley et al., 2013; Locke & Golden-Biddle, 1997). The competence and reflexivity of the researcher in interpreting and reinterpreting data are necessary aspects of qualitative research. In this study, the primary researcher possessed extensive experience as a professional supervisor and change management facilitator, having received training in reflecting on her own biases alongside other professionals over several decades. While this experience may have helped mitigate biased thinking, it is important to acknowledge that interpretations in qualitative research are inherently subjective, regardless of the objective nature of the underlying reality (Ackroyd & Fleetwood, 2005; Astley, 1985).

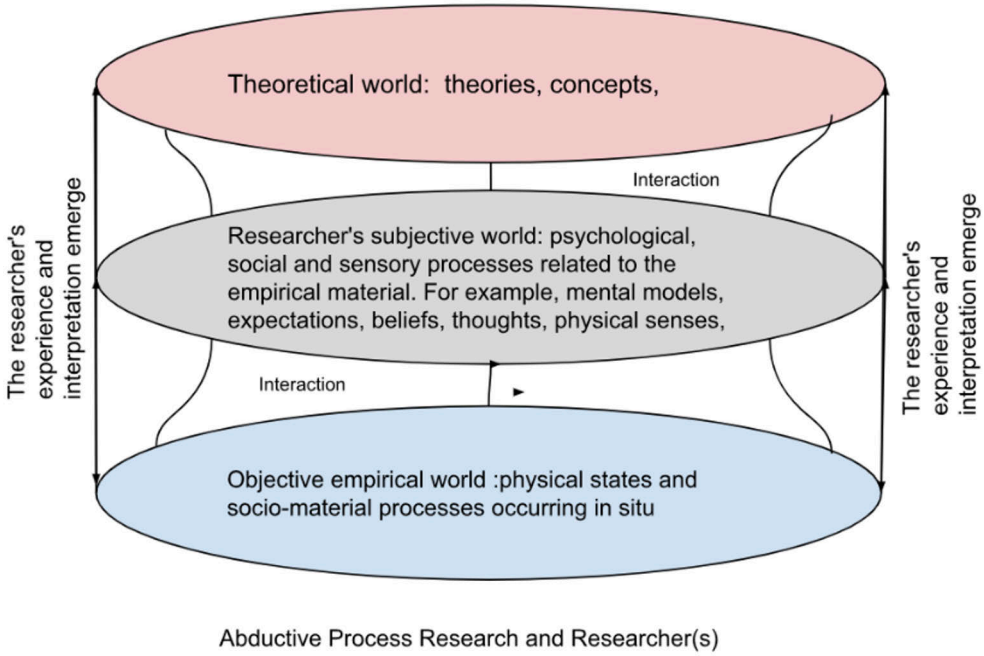

Figure 44. Abductive process research and researcher(s) used in this research. Modified from existing research.

"Sensitive construction" allows for the subjectivity of the researcher and emphasises active processual interpretation and guidance of the research process in ethnography (Alvesson & Kärreman, 2007). Therefore, I did not simply follow the data but listened to it through my own senses and through a dialogue of reflective and reflexive processes (Enang et al., 2023; Gherardi, 2017, 2023). Importantly, I triangulated the data with affective and normative commitment surveys and key informant interviews, as well as focus group interviews in which I invited research participants to reflect the data just produced (Farnsworth & Boon, 2010; Meyer & Parfyonova, 2010; Parker & Tritter, 2006; Stewart et al., 2023b). The researchers reflected on the observed and video-recorded data and discussed their observations during the research process (Gylfe et al., 2016; Heath et al., 2023a; Knoblauch & Tuma, 2023).

The strong theoretical base of self-categorisation theory and sensemaking theory and its sensemaking types allowed us to develop a strong methodological contribution while extending and complementing the theoretical model of group identity creation (Kuusisto & Mäkinen, 2023). The model of group identity formation was the result of a creative abductive research process (Dubois & Gadde, 2002; Langley et al., 2013). The empirical evidence motivated me to delve deeper into the theoretical world in search of an explanation (Douven, 2011). I recalled the

invitation from sensemaking scholars to conduct empirical research on the intersection of identity and sensemaking, and the invitation from practical strategy scholars to engage with the practical world of strategy implementation (Kohtamäki et al., 2022; Mackie & Smith, 2017; Sandberg & Tsoukas, 2011, 2020; Smith & Mackie, 2015).

Reliability and validity are important concepts in research methodology, including abductive research. However, their application and interpretation can be somewhat different in abductive research compared to more traditional research approaches, such as deductive or inductive research (Dubois & Gadde, 2002). Reliability refers to the consistency and stability of research findings. In abductive research, the emphasis is on providing a clear and transparent account of the research process, including the steps taken in data collection, analysis and interpretation (Douven & Igor, 2011; Dubois & Gadde, 2002; Locke & Golden-Biddle, 1997). My aim was to offer a rich and nuanced description of my research process, using visual information from video-recorded data. I strived to strengthen the credibility of my findings by including precise descriptions and documentation of the research process, including visual data, although I did not aim for strict replicability or consistency in the same way as quantitative studies. Validity concerns the accuracy and soundness of research findings and their ability to provide meaningful and reliable insights. In abductive research, validity is often evaluated in terms of the plausibility and coherence of the arguments and interpretations put forth (Douven, 2011). Since abductive research involves reasoning from empirical evidence to extend theoretical explanations, researchers should strive to present logical and internally consistent arguments grounded in the empirical material (Locke & Golden-Biddle, 1997). Video recording allowed me to engage in extensive data analysis to discover the embodied mechanism of group identity creation (Gylfe et al., 2016; Heath et al., 2023b) Researchers should engage in reflexivity and critically examine their own biases and assumptions throughout the research process to improve the validity of their interpretations, as I did, based on my experience of facilitating reflexive and reflective change processes and in practice during my research project. In abductive research, validity is closely linked to the plausibility and richness of the explanations and theoretical contributions made based on the empirical data. Overall, reliability and validity in abductive research are concerned with providing a clear and transparent account of the research process, ensuring the coherence and logical soundness of interpretations and generating plausible and meaningful insights based on the empirical material.

The whole research of collective sensemaking during group identity creation provides many fruitful avenues for future research. First, measuring affective and normative commitment development during different phases of group identity creation might provide new insights into the dynamics of unconscious cognitive and

emotional X-systems and conscious cognitive C-systems during group identity creation (Healey et al., 2015; Herrbach, 2006; Meyer & Parfyonova, 2010). In the case of this research, the actors were voluntary participants. This could influence the successful development of affective commitment, which also ensured the development of normative commitment and group identity formation. In my research, I wanted to ensure that group identity developed from embryonic to adult group identity to verify our theoretical model and discover methodological guidelines related to group identity creation research. Therefore, I recommended voluntary, participatory group building. It may be that non-volunteer participants may not develop affective commitment at the same pace and intensity as in my case company, so it would be interesting to follow group identity development in such a situation. It may be that the level and timing of sensegiving are more important for group identity formation in such situations (Maitlis, 2005; Rouleau, 2005).

Second, considering my empirical findings, the group protects its embryonic group identity from outsiders by requiring explicit agreement with group norms before allowing new members to join (see Figure 30). This empirical result may provide some fruitful avenues for other researchers in the future. It might be interesting to test empirically how the group would react to outsiders at different stages of group identity creation.

Third, I noticed that there was a certain pattern of temporal regularity in relation to the normative discursive loop. It seemed that this group size needed an average of ten minutes to discuss one normative discussion topic in the early stages of group formation. If there is a certain temporal pattern related to group dynamics, it might be useful for practitioners to investigate this further. This could provide more guidance for group facilitation processes. More information on the temporal aspects of the process of group identity formation would also be useful for practitioners and managers setting up new working groups related to strategy implementation.

Fourth, since the social background of group members affects group dynamics, it would be interesting to test different combinations of group members' backgrounds and their temporal effects on affective and normative commitment and thus on the process of group identity formation. As mentioned earlier in this research and identified empirically, the length of the collective sensemaking episode may vary (Golden-Biddle, 2020; Knoblauch & Tuma, 2023; Sandberg & Tsoukas, 2015; Weick et al., 2005). In particular, the previous social roles of group members and the organisational culture might affect the successful establishment of a sustainability working group (Aguinis & Glavas, 2013, 2019; Kahn, 1990), and the level of affective and normative commitment might influence the level of systemic power (Elfenbein, 2014; Turner, 2005). Different cultural environments could test how strong the working group is and how well it will withstand pressure against its proposals for sustainable solutions.

Fifth, I did not employ quantitative research methods to investigate the emergence of sensemaking types. It would be intriguing to determine the prevalence of each sensemaking type at different stages of group identity formation. Additionally, it would be beneficial for practitioners to identify the optimal conditions for implementing change management strategies based on the identified sensemaking types. Artificial intelligence (AI) could potentially provide valuable support in this regard. It can assist in data analysis using natural language processing techniques, helping researchers identify more nuanced patterns and trends related to sensemaking types. AI can also make predictions and recommendations based on real-time feedback through machine learning techniques. Furthermore, AI can recommend suitable sustainability implementation strategies by continuously analysing and monitoring communication channels, enabling the identification of shifts in sensemaking patterns and providing timely insights to practitioners. This allows practitioners to adjust their change strategies, interventions or communication approaches based on evolving sensemaking types, facilitating more responsive and adaptive change management efforts. Overall, AI has the potential to assist researchers and practitioners in exploring sensemaking types, understanding group dynamics and enhancing change management efforts by providing capabilities such as data analysis, pattern recognition, prediction, recommendation, personalisation, and real-time monitoring.

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