Universidade Vigo

Noortje Keurhorst
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Branches of Belonging: Imagining collective flourishing in the Galician monte

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Escola Internacional
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DOCTORAL DISSERTATION

Branches of Belonging
Imagining collective flourishing in the Galician monte

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2025

Noortje Keurhorst

declares that no part of the work presented in this thesis has been submitted in the support for another degree or qualification of this university or another educational institution.

Pontevedra, 29. 09. 2025

The PhD student

Acreditación da dirección

Mario Pansera y Javier Lloveras FAN CONSTAR que o presente traballo, titulado *Branches of Belonging; Imagining collective flourishing in the Galician monte*, que presenta Noortje Keurhorst para a obtención do título de Doutor, foi elaborado baixo a súa dirección no programa de doutoramento "[Doutoramento en análise Económica e Estratexia Empresarial]" desde setembro do 2021 a setembro de 2025.

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Longa noite de pedra

O teito é de pedra.
De pedra son os muros
i as tebras.
De pedra o chan
i as reixas.
As portas,
as cadeas,
o aire,
as fenestras,
as olladas,
son de pedra.
Os corazós dos homes
que ao lonxe espreitan,
feitos están
tamén
de pedra.
I eu, morrendo
nesta longa noite
de pedra.

The roof is of stone.
Of stone are the walls
and the darkness.
Of stone the soil
and the bars.
The doors,
the chains,
the air,
the windows,
the looks,
are of stone.
The hearts of men
that are lurking in the distance,
are also
made
of stone.
And I'm dying
in this long night of stone.

Celso Emilio Ferreiro

1962

Abstract

Galicia is a region in the Northwest of Spain currently credited as producing more than half of the country's timber, with further industrial growth expected as the bioeconomy gains legitimacy. However, the future of the *monte* (the Galician landscape) is contested, with differing visions and practices emerging across a range of actors. This PhD project examines how the *monte* is imagined as a site for desirable futures by engaging with three distinct groups (activists, local communities, and state forestry), using an interactional co-productionist approach and the framework of sociotechnical imaginaries. The aim of this thesis is to better understand how competing ideas about the *monte* circulate, gain traction, and are negotiated to both loosen up current debates about the future of the Galician *monte* and engage constructively with work in political ecology concerning forestry.

Theoretically, the thesis draws on interactional co-production to explore how certain actions and practices in the *monte* materialize while others do not. The sociotechnical imaginaries framework introduces a normative dimension to this analysis, offering insight into why visions of the future are stabilized or contested. The study expands this framework by engaging with vanguard visions from marginal actors, highlighting the multiplicity of knowledge claims and competing imaginaries shaping the Galician *monte*.

Methodologically, the research is grounded in ethnographic fieldwork. I engage with *comunidades de montes vecinales en man común*, which govern around 25% of Galician territory as common lands. Field visits and in-depth qualitative research were carried out in the communities of Mourente (Pontevedra), Froxán (A Coruña), and Lentille (Ourense). In parallel, I engaged with a group of anti-eucalyptus activists called the Brigadas Deseucaliptizadoras, with whom I undertook 12 actions in different places in Galicia to understand how a seemingly unique practice of destroying trees on a voluntary basis arises to bring about a desirable future. Complementing these participatory engagements, I conducted a literature review of work in the realm of forestry science to trace how the *monte* has historically been imagined as a source of national prosperity and how such imaginaries have shaped its material transformation over time. These historical transformations are further engaged with through interviews and documents that shed light on how community actors resisted and interacted with institutional imaginaries to enact their particular visions of the *monte*.

This thesis contributes to political ecology literature by analyzing how knowledge is mobilized and negotiated across diverse actors and institutional sites to legitimize particular visions of the *monte*. It responds to calls for greater attention to historical contingency in environmental governance, challenging the totalizing tendencies of the theoretical lens of neoliberal natures. By extending the sociotechnical imaginaries framework to the field of forestry, an area rarely studied through this lens, and focusing on a Global North context, the research broadens current understandings of how forests function as arenas of political, epistemic, and ecological contestation.

Resumen en Español

El sector forestal gallego constituye desde hace décadas una de las piedras angulares de la economía regional y un motor indiscutible para el desarrollo rural, además de perfilarse como un elemento clave en la transición hacia la bioeconomía emergente. Con más de dos millones de hectáreas de superficie forestal, lo que representa en torno al 47% del territorio de Galicia, el monte se configura como un recurso fundamental que sostiene a una industria que aporta más de la mitad de la producción maderera de toda España. A través de una cadena de valor que integra múltiples fases –desde la tala hasta el aserrado, la producción de pasta y papel, la fabricación de tableros, la carpintería y la industria del mueble–, más de 2.200 empresas generan una facturación anual superior a los 2.200 millones de euros y contribuyen aproximadamente con un 1,6% al Producto Interior Bruto de la comunidad autónoma. En este contexto, la expansión del eucalipto durante las últimas décadas constituye un fenómeno notable: desde las casi 30.000 hectáreas en 1973 hasta más de 400.000 en la actualidad, configurando paisajes forestales y generando tanto oportunidades como controversias.

La importancia del monte no se reduce a la producción de materias primas; se proyecta también en los discursos contemporáneos que vinculan su gestión con la circularidad, la sostenibilidad y la innovación. La estrategia gallega para el sector forestal y la bioeconomía se articula en torno a principios de conservación de la biodiversidad, uso multifuncional de los montes y generación de empleo e inclusión social en zonas rurales. Políticas como la revisión del Plan Forestal de Galicia plantean un horizonte de veinte años en el que se promueve la integración del sector en las dinámicas de la economía verde y la bioeconomía de bajo carbono. Estas iniciativas buscan fomentar la construcción sostenible, el uso de la biomasa forestal para energías renovables, la innovación tecnológica y la transferencia de conocimiento, siempre con la expectativa de revitalizar los espacios rurales. Sin embargo, tras este marco de posibilidades también se ocultan tensiones históricas y contradicciones que atraviesan el presente y el futuro del monte gallego.

Uno de los problemas más recurrentes que se asocian al monte es el denominado abandono rural. La pérdida de población en el medio rural gallego ha sido un proceso constante a lo largo del siglo XX y continúa hasta nuestros días. Desde mediados del siglo pasado hasta el año 2000, el porcentaje de habitantes de Galicia que residían en el campo cayó de un 71,8% a un 14,3%, y en las dos primeras décadas del siglo XXI las cifras siguieron descendiendo. Municipios de menos de 5.000 habitantes han perdido decenas de miles de residentes, y se habla de más de 150.000 personas menos en el medio rural entre 2000 y 2018. El discurso del abandono ha permeado tanto la esfera política como la mediática y la académica, hasta el punto de constituirse como marco explicativo predominante de los problemas del monte. Esta despoblación se vincula a la pérdida de prácticas tradicionales de gestión del territorio, a la fragmentación extrema de la propiedad privada y al consiguiente debilitamiento del tejido social que históricamente mantenía el monte cuidado y productivo.

Las consecuencias de este proceso son múltiples, pero una de las más visibles y trágicas se manifiesta en los incendios forestales. Galicia ha registrado más de 100.000 incendios entre 1983 y 2016, lo que supone 1,8 millones de hectáreas afectadas. La recurrencia de estos episodios mortales se explica a partir de factores diversos: desde la acumulación de combustible en montes abandonados hasta los conflictos en torno al uso de la tierra, pasando por fenómenos climáticos y socioeconómicos más amplios. El fuego, en este sentido, se convierte en síntesis de las problemáticas asociadas a la despoblación, el desempleo, la pérdida de conocimiento tradicional y la desarticulación del tejido

comunitario. De ahí que el discurso institucional y científico se oriente cada vez más hacia la necesidad de un “monte organizado”, bajo la convicción ampliamente compartida de que “un monte organizado no arde”.

El concepto de organización del monte encierra diversas dimensiones. Por un lado, remite a procesos de concentración parcelaria que buscan superar el minifundismo y dar lugar a explotaciones de mayor tamaño, más fáciles de gestionar y más atractivas para la inversión. Por otro lado, implica el fomento de la participación del sector privado mediante incentivos y subsidios, la implementación de mecanismos de pago por servicios ecosistémicos, el refuerzo del vínculo entre el monte y la industria de base biológica, así como la inversión en cartografía forestal de alta resolución y en modelos predictivos de largo plazo en colaboración con universidades y centros de investigación. Todo ello se combina con un énfasis en la innovación y el desarrollo tecnológico que permita optimizar la composición arbórea y la densidad forestal tanto desde el punto de vista ecológico como económico.

En este escenario, las comunidades de montes vecinales en mano común (CMVMC) emergen como actores centrales. Estas comunidades gestionan aproximadamente 650.000 hectáreas, alrededor del 25% del territorio forestal de Galicia. Su particularidad jurídica radica en que son tierras de propiedad privada pero de titularidad colectiva, ligadas a la residencia habitual en la parroquia o aldea correspondiente. La propiedad, por tanto, no es individual ni divisible, sino comunal y dinámica, ya que los derechos se adquieren o se pierden en función de la residencia. Con más de 3.000 comunidades activas, el modelo de los montes vecinales constituye un elemento distintivo de la estructura agraria gallega y representa una alternativa de gran escala frente a la atomización de la propiedad individual. Su protagonismo en los planes forestales responde no solo a la extensión de las tierras bajo su gestión, sino también a la potencialidad de actuar como espacios de innovación en prácticas colectivas y en nuevas formas de gobernanza del territorio.

La literatura académica y las políticas públicas convergen en señalar que los problemas del monte gallego se definen principalmente por la despoblación, el desempleo, el abandono rural y la erosión del conocimiento tradicional. Frente a ello, se invocan diferentes recetas de organización. Algunas propuestas defienden delegar la gestión de los montes a empresas privadas con capital y saber técnico suficiente para garantizar su rentabilidad, a menudo bajo regímenes de arrendamiento a largo plazo y penalización de propietarios inactivos. Otras visiones apuestan por reforzar el papel del Estado como incentivador de la participación comunitaria, con la esperanza de que los residentes puedan asumir la gestión adecuada si cuentan con apoyos suficientes. También se enfatizan las barreras institucionales que dificultan la acción de las comunidades, y se aboga por ampliar la noción de valor del monte más allá del económico, incluyendo dimensiones sociales, culturales y de economía circular.

La pregunta de fondo, sin embargo, sigue abierta: ¿cuál es la mejor manera de asegurar un futuro próspero a través de la gestión del monte y de sus componentes humanos y no humanos?

La ecología política alerta sobre la neoliberalización de la naturaleza, en la que se introducen mecanismos de mercado como solución a los problemas ecológicos y sociales. En el marco de la llamada naturaleza neoliberal, las críticas a la gobernanza forestal y ambiental han señalado que este enfoque tiende a simplificar en exceso los complejos sistemas socioecológicos. Al priorizar soluciones basadas en el mercado, se generan dinámicas que convierten la naturaleza en una estrategia de acumulación y refuerzan desigualdades sociales. Este tipo de gobernanza introduce lógicas económicas en las relaciones con la naturaleza bajo el pretexto de protegerla, pero en la práctica contribuye tanto

a su deterioro como a la ampliación de brechas sociales. Los mecanismos de mercado, como los créditos de carbono o los pagos por servicios ecosistémicos, reducen los ecosistemas a mercancías dentro de marcos antropocéntricos que anteponen el crecimiento económico a los límites ecológicos. Desde esta perspectiva, el monte pasa a entenderse de manera unidimensional, como un conjunto de árboles que generan recursos – madera, almacenamiento de carbono o espacios de ocio. Esta visión lo convierte en un objeto técnico y burocrático de gestión, con consecuencias negativas tanto para las dinámicas sociales vinculadas al territorio como para la salud de los ecosistemas. En paralelo, el concepto de "bosque político" subraya que los bosques no son entidades naturales neutras, sino formaciones político-ecológicas moldeadas por prácticas de gobernanza histórica y discursos institucionales.

Las críticas al concepto de "naturalezas neoliberales" señalan que este enfoque, aunque útil para comprender cómo las lógicas de mercado se extienden hacia la gestión de lo ambiental, resulta limitado si se lo interpreta de manera rígida o universal. En primer lugar, se cuestiona su tendencia a simplificar procesos complejos al centrarse en describir cuándo, dónde y por qué los proyectos neoliberales se implementan, fracasan o prosperan, sin profundizar en la diversidad histórica y geográfica que los caracteriza.

Siguiendo las críticas, el neoliberalismo no es un fenómeno homogéneo ni coherente en todas partes. Sus expresiones cambian según escalas territoriales, marcos institucionales y condiciones sociales particulares, lo que significa que, aunque las políticas puedan parecer similares, en realidad responden a contextos locales que las transforman. Desde esta perspectiva, hablar de una única "neoliberalización de la naturaleza" corre el riesgo de invisibilizar las variaciones y contradicciones presentes en la práctica. También se critica la idea de concebir la neoliberalización como un proyecto hegemónico y monolítico que absorbe a la naturaleza de manera predecible. En su lugar, se plantea entenderla como un proceso situado, con resultados diversos, que no siempre siguen la lógica doctrinal neoliberal de forma estricta. Por ejemplo, ciertos mecanismos de gobernanza ambiental, como los servicios ecosistémicos, muestran desviaciones significativas respecto de lo que el neoliberalismo plantea en teoría, lo que evidencia la necesidad de estudiar cómo se reconfiguran en la práctica concreta. Estas críticas subrayan la importancia de adoptar enfoques etnográficos y contextuales que permitan observar cómo las políticas y prácticas de gobernanza ambiental se desarrollan en escenarios específicos, interactuando con saberes locales, instituciones particulares y trayectorias históricas. Solo de este modo es posible captar la heterogeneidad, los matices y las resistencias que atraviesan los procesos vinculados a la llamada naturaleza neoliberal, evitando caer en generalizaciones que no reflejan su complejidad real.

Frente a ello, la investigación que se resume aquí se sitúa en la tradición de los Estudios de Ciencia, Tecnología y Sociedad (STS), inspirándose especialmente en las teorías de Sheila Jasanoff sobre co-producción e imaginarios sociotécnicos. Más que preguntar qué modelo de gestión es más eficaz, la investigación busca comprender cómo actores humanos y no humanos – árboles, máquinas, comunidades e instituciones – son coconstruidos en la búsqueda de futuros deseables. La investigación persiguió varios objetivos interconectados, refinados para entablar un diálogo crítico con las literaturas de ecología política, STS y gobernanza forestal.

Objetivo de investigación

Investigar cómo diferentes actores imaginan y ponen en práctica futuros deseables para el *monte*

gallego a través de formas de gobernanza, prestando especial atención a cómo los conocimientos movilizados en la construcción de estos imaginarios reflejan y promueven ideas sobre cómo deben organizarse la naturaleza y la sociedad.

Objetivos específicos

a. Profundizar en la comprensión de los imaginarios contemporáneos de futuros deseables en el *monte*, considerando la evolución histórica de los imaginarios institucionales.
b. Analizar cómo las visiones de vanguardia no expertas sobre un *monte* deseable interactúan con los imaginarios institucionales dominantes.
c. Examinar cómo los conocimientos y prácticas movilizados en la construcción de estas visiones o imaginarios articulan y sostienen visiones normativas sobre la organización de la naturaleza y la sociedad.

En conjunto, estos objetivos orientan la investigación hacia una comprensión de la gobernanza forestal no como una cuestión técnica de optimización de recursos, sino como un proceso profundamente social y político donde imaginarios, prácticas y arreglos materiales coproducen visiones de futuros deseables.
El estudio se fundamenta en el marco teórico de los imaginarios sociotécnicos, entendidos como visiones colectivas de futuros deseables, animadas por comprensiones compartidas de ciencia, tecnología y orden social. Esta perspectiva destaca cómo prácticas de gobernanza, arreglos ecológicos e instituciones sociales son coproducidos en lugar de existir como dominios separados.

Se adopta un enfoque constructivista e interpretativo, que reconoce que las realidades sociales se negocian continuamente y no son fijas. La trayectoria histórica es importante: los imaginarios no son solo visiones contemporáneas, sino construcciones históricamente contingentes moldeadas por prácticas y discursos previos.

Metodológicamente, la investigación combina:

1. Análisis histórico de documentos de política y discursos institucionales. Este rastreo permite examinar cómo los imaginarios estatales sobre el monte han evolucionado a lo largo de décadas y cómo se han construido categorías como “el monte” o “la comunidad”.

2. Análisis comparativo entre espacios y actores. Al observar cómo se articulan los imaginarios de forma diferente en instituciones, comunidades vecinales y grupos activistas, el estudio revela tanto diversidad como negociación entre perspectivas.

3. Etnografía multi-situada. Siguiendo la propuesta de George Marcus (1995) de “seguir la trama”, la investigación se desarrolló en múltiples lugares de Galicia donde los imaginarios del monte se ponen en práctica. Estos sitios incluyen: CMVMC Mourente, CMVMC Froxán, Lentille, las *Brigadas Deseucaliptizadoras* y otras comunidades de montes como Teis, Tameiga, A Lama, y Salcedo.

4. Análisis interpretativo comparativo. Al yuxtaponer imaginarios institucionales con visiones de base, el estudio analiza cómo circula el conocimiento, cómo los actores se definen a sí mismos en relación con el monte y cómo interactúan los distintos imaginarios.

Esta metodología permite explorar no solo lo que dicen las políticas o hacen las comunidades, sino también cómo significados, prácticas y arreglos materiales se articulan para configurar simultáneamente la naturaleza y la sociedad.

Los tres imaginarios históricos identificados a través de la revisión de literatura académica, literatura gris, documentos de política y legislación, prensa y otras fuentes secundarias, fueron el de la silvicultura para la restauración de la naturaleza (Sección 4.1), la silvicultura para la prosperidad productiva (Sección 4.2) y la silvicultura para el desarrollo sostenible (Sección 4.3). Cada uno de estos imaginarios se caracteriza por patrones específicos de tenencia de la tierra, epistemologías particulares, formas de concebir el monte y aproximaciones diferenciadas a la participación pública.

El imaginario de la silvicultura para la restauración de la naturaleza se articula en torno al Estado, que prioriza la restauración ecológica y la preservación de una comunidad no humana diversa, con especies arbóreas adaptadas a las condiciones ecológicas locales y seleccionadas mediante métodos científicos inspirados en la ciencia forestal alemana. El conocimiento del monte se sustenta en la cartografía y la evaluación ecológica, con el objetivo de restaurar o mantener una "naturaleza pura" y una forma equilibrada de productivismo. En este marco, la población es vista a menudo como destructiva o carente de conocimientos, lo que conduce a estrategias basadas en la exclusión y la educación, buscando alinear las conductas sociales con los objetivos de restauración.

El segundo imaginario, el de la silvicultura para la prosperidad productiva, se institucionalizó con la llegada al poder del régimen de Francisco Franco. Este enfoque concebía el monte como un espacio gobernable a través de la estandarización, con lógicas extractivistas y orientadas a la productividad, en servicio de la construcción de una Gran Nación. El monte se entendía principalmente a partir de ciclos de producción y planificación para maximizar el rendimiento, con la naturaleza conceptualizada como un recurso a optimizar tanto para la ganancia productiva como para sostener grandes infraestructuras —como cuencas hidrográficas— igualmente subordinadas a objetivos productivos. En este marco, la ciudadanía era considerada incapaz de contribuir de manera significativa, y la interacción con el Estado se materializaba fundamentalmente en apropiaciones forzosas de tierras comunales y procesos de "modernización". Basta recordar el ultimátum de "modernizarse o emigrar" que en 1957 el director de Montes del Estado, Martínez Hermosilla, dirigió a los comuneros, en consonancia con el desarrollo de polos industriales.

El último imaginario, que orienta hoy las intervenciones institucionales en el monte, es el de la silvicultura para el desarrollo sostenible. En él, la propiedad privada de la tierra es considerada deseable y la gestión forestal se apoya en herramientas tecnológicas avanzadas como la teledetección, la modelización y la valoración económica. El monte se valora por su diversidad funcional y su multifuncionalidad, con un énfasis en la optimización y la sostenibilidad económica. Se proponen así nuevos mercados para su aprovechamiento multifuncional, como los créditos de carbono o los pagos por servicios ecosistémicos. En este contexto, la población es percibida en gran medida como desinteresada, por lo que las estrategias de implicación se centran en ofrecer incentivos económicos que alineen los intereses individuales y colectivos con prácticas de gestión sostenible.

Los imaginarios institucionales, aunque se difunden a través de canales formalizados de gobernanza, colaboración científica y alianzas corporativas, no derivan su legitimidad únicamente de sus arquitectos institucionales, sino también de su articulación en múltiples espacios, incluidos aquellos ocupados por actores ajenos a los marcos epistémicos o ideológicos dominantes. La forma en que las comunidades

comunales han respondido históricamente a estos imaginarios ha sido diversa, y, a través del trabajo de campo, el Capítulo 5 desarrolla en particular cómo una comunidad comunal periurbana negocia hoy el imaginario sociotécnico vigente. En esta sección se sintetizan los hallazgos clave relativos a cómo las comunidades han continuado históricamente utilizando su monte comunal y cómo en la actualidad se conciben y cuidan los montes.

La dictadura franquista (1939-1975), con su campaña agresiva para desmantelar la tenencia comunal y consolidar un imaginario forestal centralizado y productivista, provocó formas de disenso más individualizadas y locales, y tambien una movilización colectiva. Las comunidades combinaron tácticas cotidianas persistentes, como la ocupación simbólica de tierras o el mantenimiento de prácticas tradicionales de quema, con protestas organizadas y desafíos legales. Un momento importante para el monte comunal ocurrió en la década de 1970 con las protestas contra la autopista AP-9, que articularon comunidades rurales dispersas en un movimiento unificado que exigía el reconocimiento legal de los derechos comunales. Esta lucha ejemplifica cómo los grupos marginados se apropiaron estratégicamente de discursos institucionales (como el derecho de propiedad o las evaluaciones de impacto ambiental) para legitimar sus visiones, configurando una alternativa fundamentada en la autonomía territorial. El modo en que las protestas de la AP-9 culminaron en el reconocimiento legal de los montes comunales muestra cómo las comunidades rurales gallegas se relacionan con su tierra y reflexionan sobre cómo y por quién debe decidirse su uso.

El trabajo etnográfico con la comunidad de Mourente y entrevistas con otras comunidades refuerza el papel central de la autonomía en el imaginario de los comuneros sobre el monte. A través de la adopción del lenguaje institucional en torno a los servicios ecosistémicos y de la colaboración con ingenieros forestales, los comuneros se mueven dentro del marco institucional de un modo que sirve a su propio objetivos de toma de decisiones localizadas para un futuro mejor en el monte. Así, los comuneros de Mourente incorporaron el lenguaje de los servicios ecosistémicos para subrayar que su trabajo de cuidado del monte beneficia a la ciudad de Pontevedra y a sus habitantes – por ejemplo, proporcionando aire y agua limpios – y que estos beneficiarios deberían remunerar el trabajo realizado en favor de una comunidad lejana. Esta reivindicación debe comprenderse en relación con la situación actual de los montes, donde la profesionalización y la burocratización han impuesto una carga significativa sobre los comuneros. Para ellos, el reconocimiento y pago por los servicios ecosistémicos constituye una vía de afirmación de su visión de autonomía, en tanto supone reconocer el trabajo tanto de los comuneros como del propio monte.

La visión de vanguardia de los Brigadas Deseucaliptizadoras que concibe la destrucción como cuidado se fundamenta en formas de conocimiento corporal, experienciales y científicas, donde especies como el eucalipto y la acacia se vuelven “eliminables” debido tanto a la violencia asociada a su presencia ecológica como a la historia sociopolítica ligada a su abundancia. Esta visión se materializa en prácticas aún poco comunes o institucionalmente consolidadas, como las acciones voluntarias de fin de semana en las que participan comunidades locales y voluntarios de toda Galicia. Puede comprenderse mejor a través del enfoque coproduccionista empleado en esta tesis. Las prácticas de destrucción – talar, arrancar de raíz o anillar árboles – constituyen modos corporales de conocer a estas especies y de reforzar el antagonismo hacia ellas. La dificultad para erradicarlas las convierte en enemigos aún más poderosos. Asimismo, los relatos sobre peligros, miedos y experiencias con el fuego añaden una dimensión existencial a la forma en que se imaginan los eucaliptos y las acacias. La violencia atribuida a su presencia en el monte se fundamenta tanto en la experiencia directa en el territorio como en el

conocimiento científico sobre las especies invasoras y su impacto en los ecosistemas locales, además de vincularse con las intervenciones históricas del Estado en las tierras comunales.

La investigación aporta varios resultados clave, organizados en torno a dos ejes centrales: la negociación de imaginarios a lo largo del tiempo y la negociación de imaginarios entre diversos actores.

1. Más allá de las dicotomías: del Estado vs. comunidades a la negociación de imaginarios

Los enfoques clásicos de ecología política suelen enmarcar la gobernanza forestal como un conflicto entre actores estatales o corporativos poderosos y comunidades marginadas. Aunque estas dinámicas existen, dicha visión binaria simplifica en exceso la complejidad de cómo se imaginan y que praticas usan para mejorar los montes. Mediante la lente de los imaginarios sociotécnicos, el estudio demuestra que la gobernanza no trata solamente de dominación o resistencia, sino también de negociación. Las comunidades no se limitan a reaccionar ante los imaginarios estatales; movilizan sus propias visiones, apelando a recursos epistémicos distintos y relacionándose con marcos institucionales de manera creativa.

2. Temporalidad: imaginarios como construcciones históricas

Los imaginarios forestales en Galicia están profundamente enraizados en trayectorias históricas. Las actuales llamadas a un “monte organizado” no pueden entenderse sin considerar procesos previos de reforma agraria, gobernanza comunal, forestación industrial y crisis ecológicas. Al rastrear cómo han evolucionado los imaginarios, la investigación revela que los desafíos actuales de gobernanza se configuran a partir de decisiones y categorías del pasado.

3. Diversidad de imaginarios: más allá del discurso de los expertos

El estudio demuestra que los imaginarios no se limitan al discurso institucional o experto. Actores de base, como las Brigadas Deseucaliptizadoras, producen visiones alternativas que recuperan prácticas tradicionales de trabajo colectivo y las reinterpretan para las luchas ecológicas contemporáneas. Las comunidades vecinales articulan imaginarios que equilibran viabilidad económica, cohesión social y cuidado ecológico. Estas visiones de vanguardia interactúan, cuestionan y en ocasiones complementan los imaginarios institucionales, mostrando la pluralidad de formas en que se imagina el monte.

4. El conocimiento como elemento central de la coproducción

Los imaginarios se sostienen y se ponen en práctica a través de prácticas de conocimiento – ya sea mediante el mapeo forestal, la gestión de especies invasoras o la organización del trabajo comunal. El conocimiento circula entre espacios: investigadores universitarios, miembros de comunidades y activistas contribuyen a dar forma a los imaginarios mediante sus prácticas. El estudio enfatiza que el conocimiento no es neutral, sino normativo, y que incorpora supuestos sobre cómo deben organizarse sociedad y naturaleza.

Un futuro próspero para el monte gallego no puede reducirse a soluciones técnicas o mecanismos de mercado. Requiere reconocer la pluralidad de imaginarios, la profundidad histórica de las categorías de gobernanza y la coproducción entre comunidades, instituciones y ecosistemas.

Palabras clave: monte gallego, forestal, imaginarios sociotécnicos, gestion comunal

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1. Introduction

"*Forests have long held a hugely important role in our economy and society, creating jobs and providing food, medicines, materials, clean water and more. For centuries, forests have been a thriving hub for cultural heritage and craftsmanship, tradition and innovation. But as important as they were in the past, they are essential for our future. Forests are a natural ally in adapting to and fighting against climate change and will play a vital role in making Europe the first climate neutral continent by 2050. Protecting forest ecosystems also lessens the risk of zoonotic diseases and global pandemics. A healthy future for people, planet and prosperity therefore depends on ensuring healthy, biodiverse and resilient forests across Europe and the world*." – European Commission (2021)

"*Climate change drives home the need to put the planet, people and our communities at the heart of how we reset our world to create a more equitable and sustainable future. HP is committed to protecting, restoring and promoting sustainable forests*." – Ellen Jackowski, Chief Sustainability & Social Impact Officer at HP

"*The twin crises of climate change and biodiversity loss are damaging the planet and harming human health. Through AZ Forest, we are working with local communities and ecological experts to deliver reforestation at scale*." – Pascal Soriot, CEO at AstraZeneca

"*You must get off the mountain to see the mountain*." – anonymous

The importance of forests for human and planetary wellbeing is undisputed. From the European Commission to national governments to private companies to civil society actors, the need to take care of forests to improve human health, combat climate change, restore biodiversity, and provide prosperity more generally is ubiquitous. Yet what 'best' ways to pursue forestry entails does not constitute a uniform strategy, but is instead subject to competing approaches.

43.5% of the European Union's land surface is considered wooded area, and the EU considers forests as fundamental to the health and well-being of the EU's citizens (European Comission, 2021). Simultaneously, the European Commission warns that forests in the EU are under increasing strain, from natural processes, climate change, and human-derived pressures. They propose increasing the quality and quantity of trees through various measures, like planting 3 billion additional trees by 2030, creating payment schemes, fostering growth in the bioeconomy sector, promoting so-called win-win measures for sustainable forestry, encouraging citizen involvement, and science-based monitoring of forests. Private actors, like AstraZeneca and HP quoted above, also envision futures that require action regarding the creation and maintenance of forests (for health, climate change, biodiversity).

While the importance of forests seems ubiquitous, something we grown up with and treat as a given, by taking a step away from the self-evidence of the forestry issue (or descending the mountain), I wonder how the forest is mobilized and with what political ramifications. I wonder, simply put, what is the forest? Who gets to define the forest? How are definitions, or knowledge about forests, formulated, and what ends does such knowledge serve? Rather than remaining on the mountain, through this project I descend the mountain, look at it from different angles and consider it entirely possible that upon return, the mountain won't actually be the same.

1.1 Setting the scene: the Galician *monte*

In the northwest of Spain lies the autonomous community of Galicia, recognized as the ninth largest forested region in Europe with 70% of its *monte* classified as forest (Bustabad, 2023). The Galician *monte*, loosely defined as a multifunctional area of land whose uses traditionally included forestry, grazing, and limited cropping, is a relatively infertile area of land that provides fertile ground for envisioning prosperous futures attainable through forestry (or, presumably, different land-uses). While historically the Galician *monte* was used for various and varying livelihood practices (like grazing animals, gathering firewood, intermittent cropping), today the *monte* is almost synonymous with forestry.

Galicia's forestry sector is recognized as a cornerstone of its economy and a driving force for rural development, with significant implications for the emerging bioeconomy. Over two million hectares of forest (about 47% of Galicia's territory) provide a resource base to support an industry that accounts for a substantial portion of Spain's wood production, namely more than half of the country's wood production (Xunta de Galicia, 2021). The forestry-wood value chain in Galicia encompasses all phases from logging to sawmilling to pulp and paper, panel manufacturing, woodworking, and furniture production, with more than 2,200 companies and over €2.2 billion in annual turnover (Centro de Innovación e Servizos Tecnolóxicos da Madeira, 2025). 1.6% of Galicia's GDP is derived from forestry and in recent years the forested area of the region has grown immensely, with particularly significant growth in eucalyptus plantations. Cidrás & González-Hidalgo (2022) have estimated that from 1973 to 2009, the area of Eucalyptus plantations in Galicia grew from 27,963 hectares to 387,983 hectares. In 2023, the official forestry inventory published by the government of Galicia, the *Xunta de Galicia*, estimated eucalyptus to cover 409,000 hectares, coniferous trees to cover 422,000 hectares, and broadleaf trees to account for 620,000 hectares (Xunta de Galicia, 2023).

The forestry sector is seen as a key enabler of the circular bioeconomy, emphasizing sustainable management, innovation, and the development of new bio-based products and services that are biodegradable and have a lower carbon footprint. Galicia's strategy for forestry and bioeconomy is guided by principles of sustainability, biodiversity conservation, and multifunctional forest use, aiming to generate income, employment, and social inclusion in rural areas. Recent policy frameworks, such as the revised Galician Forestry Plan (Xunta de Galicia, 2021) guiding Galician forestry for the next 20 years, highlight the integration of forestry into the green economy, low-carbon bioeconomy, and circular economy. These frameworks promote responsible production and consumption, sustainable construction, and the use of forest biomass for renewable energy, while also supporting innovation, technology transfer, and job creation in rural areas.

While the *monte* is considered to launch Galicia into a more prosperous future, it is also considered to be plagued by intersecting problems. Abandonment of the *monte* – as in the withdrawal of its management or care – is cited across policy documents, forestry plans, and other public communications. Examining population statistics from the National Statistics Institute (INE) shows that in from 2001 to 2021 the amount of people living in municipalities with less than 5,000 inhabitants decreased from 483,234 to 409,524 and media outlets speak of the loss of more than 150,000 rural inhabitants between 2000 and 2018 based on data from the Ministry of Environment (Rodríguez, 2021). And earlier, from 1950 to 2000, the percentage of Galicia's population living in rural areas

dropped from 71.8% to 14.3% (Instituto Galego de Estadistica, 2004 in Seijo, 2005). Statistics and numbers match the discourse around rural abandonment that shape rural Galicia.

In addition to rural abandonment describing physical people leaving rural areas the idea also concerns the ceasing of traditional uses of the *monte*, like grazing, intermittent cropping, clearing bushes and scrubs, and other land-use practices. *Minifundismo* is a third concept often cited in relation to problems in the Galician *monte* and refers to the small land parcels that are owned by individuals, with Galicia counting more than 450,000 land-owners that own 1,4 million hectares (Xunta de Galicia, 2021) and the average forestry parcel counting 0,28 hectares. *Minifundismo* is a commonly used term in Galicia to refer to the small land size owned by individuals, which knows a history that relates closely to traditional uses of land and hereditary practices. *Minifundismo* is attributed to traditional inheritance practices, in which parents divided their land among multiple children, leading to increasingly smaller parcels over successive generations (Fernández et al., 2010; Sexto et al., 2004). This has led to many landowners, with individuals owning various parcels of land, sometimes without even knowing ¡ where such parcels are located as people have moved away from their villages. The dividing of one's land over one's children served a historical purpose that fit well within the traditional agroecosystem of rural Galicia, where the *monte* and the homestead were closely integrated to provide livelihoods to communities. If a family, for example, owned a piece of woodland, a piece of grassland, and a piece of rocky land, each of these was divided over the children of the family so that they would all have access to the different resources necessary to sustain themselves (and their families). Today, *minifundismo* is also cited as a major problem to better managing the *monte*, with the *Xunta de Galicia* (local government) experimenting with projects to group together pieces of land in order to facilitate their management as forestry plantations. One such project is that of SOFORs (*Sociedades de Fomento Forestal*) which encourage the creation of private limited companies formed by groups of forest landowners who temporarily cede their parcels to enable joint forestry management (Xunta de Galicia, Consellería do Medio Rural, 2019). As of 2024, 22 SOFORs exist and cover 4,370 hectares (Friol, 2020).

The abandonment of traditional land-use practices, ongoing rural depopulation, and the highly fragmented nature of private landownership are widely seen as troubling factors shaping the current state of the Galician *monte*. The regional government, along with other stakeholders, views one of the most visible consequences of these intersecting dynamics as being the recurring deadly wildfires that affect Galicia each year. Civio, an independent not-for-profit organization has found that between 1983 and 2016 more than 100,000 fires occurred in Galicia, burning 1,8 million hectares (Civio, 2024). The exact reasons for the recurrence and scale of deadly fires are various and varying, and could be the subject of an entire PhD thesis – and is explored by other scholars like Seijo (2005, 2009) – but the commonly cited reasons relate to what are generally considered to be overarching problems of the Galician *monte*, namely depopulation, unemployment, rural abandonment, loss of traditional and context-specific knowledge (Dominguez Garcia et al., 2017).

In response to the threat of fire, the loss of rural livelihoods and the underutilized potential of the *monte*, policy discourse increasingly centers on the notion of fostering an 'organized' *monte*. The widely held belief that 'an organized *monte* is a *monte* that does not burn' resounds across a range of actors – including commons communities, forestry scientists, private forestry companies, and policymakers, as evidenced in documents such as the *Plan Forestal de Galicia*. According to the Galician government, the vision of an organized *monte* involves several interrelated strategies: consolidating land into larger, more manageable areas; incentivizing private sector involvement through subsidies; establishing

ecosystem service payment schemes to incentivize sustainable practices; strengthening the forest-industry nexus to promote a bio-based economy; and investing in high-resolution forest mapping and long-term modeling, often in collaboration with universities. Research and development efforts are also seen as essential to optimize tree composition and density for ecological and economic viability.

One of the main protagonists in the Galician government's quest for an organized *monte* are commons communities, or *comunidades de montes vecinales en man común (CMVMC).* 99% of Galician territory is private land, with 25% considered common land (private, but commonly owned) managed by more than 3,000 commoning communities. The CMVMC differs fundamentally from private property: ownership is both collective and conditional, meaning it is acquired and lost based on one's residency status. The land cannot be claimed as individual property, nor divided among individuals, reinforcing its communal character. Legally, ownership resides with the community of residents who maintain habitual residence within the relevant territorial unit. This is colloquially expressed through the phrase *"casa abierta y con humos"* ("a house open and with smoke"), signifying active residence. As such, the composition of the ownership collective is dynamic, varying in accordance with demographic changes – new residents acquiring rights and those departing losing them. Common lands span 650,000 hectares meaning that the average size of land per community amounts to about 200 hectares. Such lands are significantly larger than private plots owned by individuals, due to the aforementioned process of *minifundismo*. The size of commons lands is one of the reasons for their protagonism in the state's forestry plans.

"*They want us to be more and more like a business*," sighs the president of the communal *monte* of Mourente in Pontevedra during an interview, when asked about the relation between common lands and the government of Galicia, the *Xunta de Galicia*. A few weeks after the interview, on the 22nd of November, 2022, the organization of Galician commons (Organización Galega de Comunidades de Montes) – joining more than 300 commoning communities – presents a petition to the Galician parliament that has been signed by over 12,000 people. The petition urges the government to commit to continued recognition of the communal character of the Galician *monte* and ensure the impossibility of individualizing the land which would make it transferable, sellable, and thus able to be privatized. The president of the organization of Galician commons called the initiative a way to protect the *monte* from the "timber oligopoly", whose interests they claim shape the Galician government's forestry plans. In this sense, while commons communities agree with institutional views that an 'organized *monte* is a *monte* that doesn't burn' their way of conceiving of an organized *monte* differs from what they perceive to be that of the Galician government.

A third group of actors that envisions change in the Galician *monte* are environmental NGOs like ADEGA (Asociación para a Defensa Ecolóxica de Galiza), Fragas do Mandeo, Verdegaia, and local activist groups that contend with the Xunta's forestry policy. These actors have criticized the Galician government's approach to forestry in the *monte* by pointing to the promotion of eucalyptus plantations that serve the Galician pulp industry – arguably a powerful actor within Galician environmental politics. A central concern for these NGOs is the Xunta's ongoing support – explicit or indirect – of eucalyptus monoculture, which they argue has grave ecological and social consequences. Eucalyptus, a non-native and highly flammable species, now occupies over 400,000 hectares in Galicia. These critical NGOs argue that the Xunta has failed to curb its spread despite official commitments to sustainable forest management. The Forestry Plan, for example, has been described by ADEGA as insufficiently ambitious, particularly in failing to propose enforceable limits on eucalyptus or a clear strategy for ecological

restoration (Pérez, 2021). These NGOs envision a biodiverse *monte* through the restoration of so-called native species (like chestnuts and oaks) and permanent moratoria on the planting of eucalyptus.

Scholars engaged with the challenges of the Galician *monte* today frame its problems in terms of depopulation, unemployment, rural abandonment, and the erosion of traditional, context-specific knowledge. These issues highlight the complex and interdependent relationship between the *monte* and rural communities (Dominguez Garcia et al., 2017). Conventional approaches to addressing these issues frequently manifest in calls from scholars and policymakers to establish greater or better "organization" for the *montes*. What “organization” means, and how it should be achieved is subject to different, yet converging interpretations. Scholars such as Bastida et al (2021) argue for communities to entrust management to private actors who have both capital and knowledge to ensure financial returns and thus adequate management of the *monte*. They applaud resolutions like the Law 9/2017 of December 26 on Fiscal and Administrative Measures in Galicia which sets up measures for third parties to lease ‘abandoned’ land for 50 years and penalize previous owners. Others write about the role of the State in incentivizing rural communities to manage their *montes*, harboring hope that local communities could undertake desirable management if adequately incentivized to do so by policy measures (Alló & Loureiro, 2016; Lana & Iriarte-Goñi, 2015). Others point to the institutional barriers and mismatches that inhibit communities’ optimum usage of the *monte*, expanding the notion of value derived from such management toward social value or the circular economy (Dominguez Garcia et al., 2017; Swagemakers et al., 2018).

1.2 Aim: exploring better futures for the *monte*

What, then, constitutes the best way forward to achieving a prosperous future through best management of the *monte* and its human and nonhuman constituents?

The case of the Galician *monte*, where institutional discourse and scholarly analyses promote the improved exploitation of local forestry resources as a pathway to economic and social prosperity, echoes political ecology critiques that warn against the dangers of neoliberalizing nature. (e.g. Bakker, 2010, 2015; Bigger et al., 2018; Büscher et al., 2014). The process of neoliberalizing nature consists of bringing market principles into the governance of nature, in order to ‘save’ nature and improve society in the process. The state’s corporate interests may be contrasted with communities’ perspectives on good forestry management and NGOs too, as various political ecologists do (e.g. Ambrose-Oji et al., 2002; Anand & Mulyani, 2020; Devine & Baca, 2020). Beyond such traditional approaches to contrasting different actor groups and their interests in the forest as a natural entity, Nancy Peluso and Peter Vandergeest (2001) introduced the concept of the "political forest" to challenge the notion of forests as apolitical or purely natural spaces. Instead, they reconceptualized forests as political-ecological formations, shaped by colonial narratives, territorial governance, and the institutionalization of scientific forestry. Grounded in detailed historical analyses of Indonesia, Thailand, and Malaysia, their work (Peluso & Vandergeest, 2001, 2011a, 2011b; Vandergeest & Peluso, 2006a, 2006b) positioned the political forest as a product of nation-state interventions and state-making processes. Such analyses pay more attention to how the forest and forest-relevant actors are constructed (Birch, 2021).

In extension of this, I follow STS scholarship and particularly the work of Sheila Jasanoff to distance myself from unproblematically taking for granted that society is made up of interest groups with clearly articulated positions and preferences, to instead consider that the interests driving the positions taken

by different actors have a social history, and that this social history has evolved to give shape to today's dilemmas in the *monte* (Jasanoff, 2004b). In this sense, I seek not to propose how the Galician *monte* can 'best be managed', or what actors are 'right' and what actors are 'wrong', or neoliberal and not-neoliberal, nor do I, as traditional political ecology would propose, center my analysis on who wins and who loses from State forestry practices in the Galician *monte* (as increasingly neoliberalizing nature for example). Instead, I engage with STS theories of co-production (Jasanoff, 2004b) and sociotechnical imaginaries (Jasanoff & Kim, 2009, 2015) to discuss the simultaneous production of society and nature in the *monte* without giving primacy to either. In this sense, the inquiry is not about how forestry in the *monte* is practiced and with what effect on social actors, but rather how both nonhuman actors in the *monte* (trees, machines, plantations) and human actors (local communities, commons communities) are made fit for each other in pursuit of a prosperous future as imagined by different actors. Such an endeavor enables a fine-grained engagement with the brief, different accounts of forestry in the *monte* mentioned earlier by inquiring into the way social actors and nature in the *monte* are co-constructed. This allows understanding *why* certain practices arise; e.g. why some communities join together with volunteers to cut down trees on the weekend while others work together with universities to map forests and potential fires and others outsource the management of their *montes* to private forestry companies. Such inquiry goes beyond considering these different interests in their difference, to instead pay attention to the role of meaning-making and knowledge across sites and actors. Following from this, the main general question I seek to tackle in this project rings as follows:

How are futures of collective flourishing envisioned and pursued in and for the Galician *monte*?

In order to engage with this overarching question, the following sub-questions are formulated:

- How do different actors define and interpret a better future of collective flourishing in and for the Galician *monte*?
- Which forms of knowledge and practices are valued, and which are marginalized, in shaping such desirable futures?
- In what ways do these practices and knowledge reflect underlying ideas about the relationship between society and nature in achieving a desirable future of collective flourishing?

In Chapter 2, these questions will be refined in conversation with relevant literatures, leading to the key objectives discussed in section 2.11 *Conclusion and key contributions*.

1.3 Methodological approach

The way I engage with the topic of how best to manage the *monte* is through the theoretical framework of sociotechnical imaginaries, which is a co-productionist approach. Here, neither the ontological nor the normative are analytically primary (Jasanoff, 2004) which means my methods of investigation and prospective analysis examines how what the *monte* is and should be is constructed across various sites by various actors. In this sense, the production of these claims is the objective of my investigation, rather than considering what is 'true' and what is 'not true'. In order to undertake this quest, I use a multi-sited ethnography approach (Marcus, 1995). This methodological approach encourages the following of meanings across sites in diffuse time-space so that complex phenomena, like the shaping of imaginaries of the *monte*, to be understood. This approach relies on the construction of networks and following meanings across actors that may not have been pre-defined before the research process as more classical qualitative studies would argue for (Alvesson & Sköldberg, 2017). The approach also

resonates with what Jasanoff (2007) proposes as a beneficial manner of studying sociotechnical imaginaries, namely through comparison.

In order to facilitate comparison and follow meaning-making by various actors, I divide my inquiry into three parts; historical state forestry, commons communities (*comunidades de montes vecinales en man comun*), and activists (the *Brigadas Deseucaliptizadoras*). The first group of actors was engaged with through an in-depth case study with the community of Mourente in Pontevedra where interviews and participatory methods were used to inquire into important themes and visions around the *monte*. Additionally, I attended conferences gathering commons communities across Galicia to learn about what generally important themes are considered on a more global (Galician) scale. Secondly, the *Brigadas Deseucaliptizadoras* were engaged with over an extended period of time, where I partook in interventions in the *monte* to eradicate eucalyptus and acacia and work towards what these activists consider desirable future for the *monte*. In addition to participatory methods like observation, taking photos, field diary, and so on, I also undertook interviews with activists or *brigadistas*. Additionally, I stayed at two field sites that are important to understand the context of the *Brigadas*, namely Froxán and Lentille. Finally, I also undertook a historical analysis of existing work on forestry science, forestry history, and grey literature like policy communications, forestry plans, laws, magazines, newspapers, and so on, to understand the historical construction of the Galician *monte* in the institutional realm. By engaging with these three separate but also interwoven and porous realms, I was able to follow meanings of the Galician *monte* and understand how distinct actors draw on and negotiate knowledge in different manners. In my analysis I reflect on the way knowledge and practice in the *monte* conjoin to legitimize particular meanings.

1.4 Contributions

The main contributions this thesis makes is to advance environmental governance analyses to consider the way knowledge is negotiated across sites to gain legitimacy, instead of originating in formally scientific sites to exert power over social actors. Rather than engaging solely with opposition between actors (e.g. state versus communities), I draw attention to the way knowledge is constructed and gains legitimacy as to provide current political ecology approaches a way forward, something called for an initiated by some scholars using co-productionist approaches (Birch, 2021; Flachs et al., 2024; Gabrys et al., 2022). Combining ethnographic, participatory tools with more formal document analyses bridges the divide between people's experience and discourse, enabling my inquiry into how meaning around the *monte* is constructed, negotiated, and gains legitimacy. A superficial reading of the politics in the Galician *monte* shows how very distinct proposals and actions arise across stakeholder groups, my thesis goes beyond reasoning this difference in terms of groups with different interests to instead find an answer as to how and why such diversity occurs and what this means for the future of the *monte*.

2. Literature Review

Political ecology has long grappled with how forests are governed and what this governance means for power, access, and resource control (Blaikie & Brookfield, 1987; 2015). This area of scholarship considers forests as political spaces where states, corporations, NGOs, and local communities negotiate their use and management. Over the past three decades, the neoliberalization of nature has become a particularly dominant lens through which to investigate the ways forestry has increasingly become shaped by market mechanisms and the consequences for local communities. In this section I outline the historical development of this scholarship, highlighting the main debates that have taken center stage over this time. I then review how *governmentality* (or *environmentality*) has been mobilized as a poststructuralist framework for studying human-nature relations in forestry governance, alongside the critiques regarding the totalizing tendency of this approach. After engaging with said approaches within political ecology, I turn to critical social and cultural theory that considers the dialectic construction of knowledge about forests to ultimately argue for the fruitfulness of engaging with STS theories that scrutinize this construction of knowledge through the idiom of co-production and the framework of sociotechnical imaginaries.

2.1 Perspectives on Political Ecology of Forests

> "Historically, the state, the peasantry, and other external interests have acted out their natural theater of the forest" (Peluso, 1992, p. 4).

Political ecology examines the complex relationships between human societies and their environments, with its origins tracing back to the 1970s and 1980s. The work of Blaikie & Brookfield (1987) on the relationship between land degradation and society is widely regarded as foundational to the field. This work departed from the comparison of successful versus faulty land-management, recognizing that both derive from and produce changes in society. The lack of knowledge about the causes for land-degradation, according to Blaikie & Brookfield (1987) lie in the disconnection between natural scientists and social scientists, which they see as the only way "to address the central question of why land managers, as we will call them (e.g. peasants, pastoralists, commercial farmers, state forest departments and so on) are so often unwilling or unable to prevent such accelerated degradation" (p. xvii). The shift towards bringing in critical social science to understand issues regarding land-degradation, and other seemingly natural phenomena, was an innovation at the time, bringing forth a rich body of scholarship considering the relationship between society and seemingly natural phenomena (in forests, but also other sites of nature).

The field of political ecology has evolved to span a wide range of research that seeks to "unravel the political forces at work in environmental access, management, and transformation" (Robbins, 2004, p. 3). Forestry has been an important site for the examination of power dynamics, environmental governance, and socioecological conflict within political ecology (e.g. Agnoletti & Santoro, 2015; Ambrose-Oji et al., 2002; Baldwin, 2003; Peluso, 1992; Peluso & Vandergeest, 2001; Scott, 1998). Peluso (1992) and Scott (1998) in particular laid the basis for investigations into how State forestry institutions interact with and shape the access and control local communities have over their forests. Peluso's (1992) work considers forestry in the context of Java. She investigates peasant actions in forests as a response to State forestry interventions, where scientific forestry principles guiding said interventions stand in stark contrast to local peasant communities' values. Scott's (1998) landmark

work on the making of legible forests through scientific methods of simplification and the concomitant process of state-making is also foundational to the study of State and local communities' interactions in forestry. He shows how forests were made legible in parallel and through similar methods by which society was made legible and thus manageable.

2.2 The neoliberalization of nature thesis

Scholarly engagement with conflicts between State forestry interests and local communities is extensive, highlighting how power shapes access to and control over forestry resources, accounting for the privatization of forest commons, and instances of (neoliberal) conservation interfering with local, traditional forestry practices. A particularly generative development within this literature is the thesis of the *neoliberalization of nature* (Bakker, 2015; Castree, 2008b; Igoe & Brockington, 2007; McCarthy & Prudham, 2004).

Harvey (2006) considers neoliberalism to be "in the first instance a theory of political economic practices which proposes that human wellbeing can best be advanced by the maximization of entrepreneurial freedoms within an institutional framework characterized by private property rights, individual liberty, free markets, and free trade" (p. 145). The so-called neoliberalization of nature thesis considers the proliferation of market mechanisms applied to nature, like carbon emissions markets, payments for ecosystem services, and water privatization aiming to 'save' or protect nature. Heynen & Robbins (2005) identify the following four relations as vital to the neoliberal agenda:

> "*Governance*, the institutionalized political compromises through which capitalist societies are negotiated; *privatization*, where natural resources, long held in trust by regional, state and municipal authorities, are turned over to firms and individuals; *enclosure*, the capture of common resources and exclusion of the communities to which they are linked; and *valuation*, the process through which invaluable and complex ecosystems are reduced to commodities through pricing" (Heynen & Robbins, 2005, p. 6, emphasis in original)

The above provides a useful entry point to understanding neoliberalism. However, its broadness renders it somewhat vague and insufficient in explaining how the neoliberal agenda extends into the environmental realm. In response, Castree's (2008, p. 142) in-depth engagement with neoliberal nature scholarship identifies a set of defining features, derived from various liberalizations, that constitute an ideal type of neoliberalism, which is relevant for studying changes in society-nature relations:

- **Privatization**: "the assignment of clear private property rights to social or environmental phenomena that were previously state-owned, unowned, or communally owned. New owners of hitherto unprivatised phenomena can potentially come from anywhere across the globe."
- **Marketisation**: "the assignment of prices to phenomena that were previously shielded from market exchange or for various reasons unpriced. These prices are set by markets that are potentially global in scale, which is why neoliberalism is often equated with geographically unbounded `free trade'."
- **Deregulation**: "the 'rollback' of state 'interference' in numerous areas of social and environmental life so that (i) state regulation is `light touch' and (ii) more and more actors become self-governing within centrally prescribed frameworks and rules). Reregulation (that

is, the deployment of state policies to facilitate privatisation and marketisation of ever-wider spheres of social and environmental life."

- **Market proxies** in the residual public sector: "the state-led attempt to run remaining public services along private sector lines as 'efficient' and 'competitive' businesses."
- **The construction of flanking mechanisms** in civil society: "the state-led encouragement of civil society groups (charities, NGOs, 'communities', etc) to provide services that interventionist states did, or could potentially, provide for citizens; these civil society groups are also seen as being able to offer compensatory mechanisms that can tackle any problems citizens suffer as a result of the previous five things listed."
  (Castree, 2008, p. 142)

The above processes ensure an ever-expanding control of the market over the allocation of (environmental) goods and services. As De Freitas et al (2015) write, neoliberalism works as "an ideal that expresses a utopian project of reorganizing capitalism at multiple scales (…) around the logic and the *ethos* of the market", whose manifestations reach different spheres of social life (p. 240). In this sense the allocation of goods and services is considered optimal if governed through market logic.

This market logic is understood to efficiently govern social life and – by extension – nature. In order to understand how this logic is increasingly imposed onto nature, Castree (2008) proposes four so-called 'environmental fixes', based on the work of Karl Polanyi, James O'Conner, Ted Benton, David Harvey, and Neil Smith. In Marxist theory, a capitalist fix refers to mechanisms that enable the survival of the capitalist system by mitigating its internal contradictions, temporary as this mitigation may be. Capital's internal contradictions like class conflict between capital and labor, overproduction, and the falling rate of profit (Marx, 1867) are solved by temporary fixes like spatial fixes or technological innovation (Harvey, 1981, 2018), or indeed environmental fixes that ensure capitalism persists while contending directly with its internal contradiction of environmental degradation (Castree, 2008b; Chambers, 2021; Smith, 2016).

2.3 Neoliberal natures applied to environmental governance and forestry

Within the frame of neoliberal nature, critiques of forestry governance and nature governance more generally have pointed out how neoliberal approaches to nature (and forestry) governance oversimplify complex socioecological systems to promote market-based solutions and exacerbate social inequalities (Watts, 2000), turning nature into an accumulation strategy (Smith, 2007). Scholarship in this realm has pointed out the pitfalls of this governance approach by describing the way relations to nature become imbued with logics that guide (orthodox) economic thinking under the pretext of saving nature, ultimately end up harming said nature and furthering social inequalities. Neoliberal approaches emphasize market mechanisms (e.g., carbon credits, Payment for Ecosystem Services), and often reduce nature to a commodity, perpetuating anthropocentric frameworks that prioritize economic growth over ecological limits (Büscher et al., 2014a). Elaborating on so-called 'myths of sustainable forestry', Delabre et al (2020) terms this 'what is counted – through valuation – counts', referring to the one-dimensionality of conceptualizations of forests as "a sum of trees that provide resources (e.g., timber, carbon storage or leisure spaces)" (p. 5). Conceptualizing the forest in this way makes forestry a technical and bureaucratic endeavor, with negative social and ecological consequences.

Delabre et al (2020) propose embracing the political character of forestry governance to counter the uniformity imposed onto forests by technical, bureaucratic conceptualizations. Political ecologists further argue that such conceptualizations of nature and forests ignore structural forces like capitalism and class inequality and fail to address root causes of environmental degradation. Critiques of institutional forestry management characterized by neoliberalization highlight the inequalities that the mobilization of neoliberal discourse exacerbates within global society (McAfee, 1999). Neoliberal interventions advanced under the rubric of saving or restoring the environment function under the pretension of freedom, choice, and rights, yet ultimately restore or maintain unequal power structures (Fletcher, 2010). More than 25 years ago, in the context of conservation, McAfee (1999) pointed out how "pricing of life offers to nature the opportunity to earn its own right to survive in an increasingly marketized world economy" (p. 3). She labelled this "selling nature to save it" (p. 1) which implies nature can only be saved if it joins capitalist logics, with Büscher et al. (2012) describing neoliberal conservation as shifting "the focus from how nature is used in and through the expansion of capitalism, to how nature is conserved in and through the expansion of capitalism" (p. 4). Neoliberal approaches to nature conservation show how market mechanisms (Castree, 2008) like carbon credits, which reduce nature to a commodity, perpetuate anthropocentric conceptions that prioritize economic growth over ecological limits (Bogert et al., 2022; Büscher et al., 2014a).

REDD+ (Reducing Emissions from Deforestation and forest Degradation) is a policy framework frequently analyzed by political ecologists through the lens of neoliberal natures. It seeks to protect forests (in 'developing countries') as a part of the Paris Agreement, under the United Nations Framework Convention on Climate Change (UNFCCC). REDD+ aims to 'turn the tide on deforestation' by incentivizing developing countries to reduce greenhouse gas emissions from deforestation and forest degradation by providing results-based payments for verified emission reductions. In addition to reducing deforestation and degradation, REDD+ encourages activities that conserve and sustainably manage forests, and enhance their carbon storage capacity. The framework operates in three phases: readiness (capacity-building and strategy development), demonstration (testing strategies and building further capacity), and implementation (full-scale, results-based actions and payments) (UNFCCC, n.d.). Approximately 1.7 billion hectares fall under the REDD+ scheme. REDD+ has been a fertile ground for political ecologists, who engage with how technical and bureaucratic views of forests perpetuated by this institutional body, like units of carbon stored or hectares of tree cover preserved (Delabre et al, 2020) exacerbate social inequalities derived from structural factors like gender and class (Chomba et al., 2016; Poudel et al., 2015).

Similarly, in the context of neoliberal community-based approaches to natural resource management, Dressler & Büscher (2008) conclude that such conservation approaches worsen social inequalities. Carrying out their research in South African natural parks, they elaborate on the way social structures interact with such policy programs, particularly how traditional, resource-based economies are disadvantaged by such programs to favor formal, wage-based economies, neglecting or keeping poor those whose livelihoods are dependent on natural resources. This resonates with aforementioned work on REDD+, where Poudel et al (2015) warns that even if the program aims to prioritize poor and marginalized households, these households are actually disadvantaged by the program as they are subject to access restrictions while being dependent on forestry resources. Other studies, too, warn that neoliberal conservation through payments for ecosystem services result in less participation of local actors in environmental initiatives (McElwee, 2012; Parkins et al., 2016). Grandia's (2007) ethnographic engagement with the Mesoamerican Biological Corridor project, to which the World Bank

pledged to invest $1.3 billion, that seeks to foster both economic development and conservation illustrates how neoliberal interventions do not achieve the biodiversity goals they commit themselves to discursively while exacerbating social inequalities. Some NGOs too have condemned the use of market-based environmental policies, arguing that they "exacerbate existing inequalities; undermine alternative regulatory systems; favor those with clear land tenure; and are exceedingly difficult to participate in or benefit from for those without the necessary investment capital, expertise, education or personal contacts' (Global Forest Coalition et al., 2008, p. 10–11 quoted in Dempsey & Robertson, 2012).

In summary, studies of the application of neoliberal rationales to nature and forestry governance highlight how prioritizing market-based mechanisms, like commodification of ecosystem services, advantages already powerful actors while harming local, forest-dependent communities. Complex social and ecological realities are simplified by these frameworks which frame the forest in a uniform, technocratic manner, sidelining cultural and social concerns and ignoring the political root causes of environmental and forest degradation, e.g. capitalist expansion.

2.4 Limits to the neoliberal nature concept

Critiques of the neoliberalization of nature offer a powerful structural analysis of how natural processes are imbued with market logics, and the mechanisms by which this occurs. Yet the approach is also criticized by various scholars, including those credited with its development. Castree (2008a) and Bakker (2010) have commented how the concept is used in a wide variety of ways, gathering together different phenomena under the label of 'neoliberalism' and reducing complex environmental governance practices to singular logic of the market.

Bakker (2010) points out how scholars of neoliberal nature tend not to go beyond when, where, and why neoliberal projects are implemented, succeed, and/or fail, while shying away from the historical and geographical differentiation that characterizes the global project of neoliberalizing nature. Peck (2004) further argues neoliberalism to be a vague and complex political-economic phenomenon that defies easy and coherent definition. Instead, its variation across geographical scales and institutional contexts means cases may resemble one another, while being shaped by local conditions. Others offer diverging cases that destabilize the idea of neoliberalization of nature as a hegemonic and monolithic project that subsumes nature in the same, predictable way to instead consider the situatedness of neoliberal policies and practices as a process (Cavanagh & Benjaminsen, 2017; Heynen & Robbins, 2005; Himley, 2008; Smessaert et al., 2020). Dempsey & Robertson (2012) write about how policies and practices of ecosystem services deviate from the neoliberal doctrine, and also propose the need to engage with the heterogeneity of the concept through situated enquiry. In light of such critiques and the need for situated, contextual approaches, Himley (2008) proposes ethnographic enquiry into how practices of neoliberal environmental governance unfold, allowing the necessary sensitivity to context.

2.5 Poststructuralist approach: neoliberal governmentality

As a way to move beyond the aforementioned critiques of the neoliberal natures framework, poststructuralist approaches to natural resource governance provide a way to consider contingency, discourse, and diverse rationalities within environmental governance (Dean, 2009; Luke, 1996). This literature draws on the Foucauldian concept of governmentality as a more nuanced and flexible approach to uncover the way market logics come to shape individuals' behavior. Governmentality, as

developed by Foucault, refers to the art of government, understood not solely as exercising top-down control over subjects, but rather as shaping the possibilities for people to act. Governmentality is also termed the 'conduct of conduct' (Foucault, 1982, 2008), working across multiple sites, actors, and institutions rather than exerted solely by the State (and capital) (Rutherford, 2007) to direct behavior in a desirable manner. States exercise biopower through governmentality, which shapes relations between people and people, between people and events, and between people and things (Rose et al., 2006). Foucault described governmentality as an "ensemble formed by the institutions, procedures, analyses and reflections, the calculations and tactics, that allow the exercise of this very specific albeit complex form of power..." (Foucault, 1970, p. 20).

Within the framework of governmentality, biopower is the term Foucault (1978, 2003) uses to describe a form of power that regulates populations through an array of institutions, techniques, and knowledges through legitimizing authority as serving the wellbeing of the population. Foucault differentiates sovereign power, which concerned the right to 'take life or let live', from biopower with operates on the logic of 'make live and let die' (Foucault, 2003, p. 241). The latter emphasizes the exertion of social control over of how life should be lived, in informed by scientifically derived notions of what is considered best for all society.

The environment, following Foucault's reasoning, is not a given sphere or ecological processes that human power simply tries to manage, nor is it a mysterious world that that human knowledge is gradually uncovering. Instead, the environment emerges as a historically produced construct that is deliberately shaped, and the way knowledge about this world is generated provides insights into the workings of power. As Luke (1995) writes, "the networks of continuous, multiple, and complex interaction between populations (their increase, longevity, health), territory (its expanse, resources, control), and wealth (its creation, productivity, distribution) are sites of governmentalizing rationality to manage the productive interaction of these forces" (p. 68). The rational management of these interacting forces consists of mobilizing assumptions, codes, and procedures to enforce particular understandings of economy, society, and the environment. The knowledge mobilized to enforce particular understandings becomes the site of producing power as they link what knowledge is considered legitimate to what organization of institutions, practices, and concepts of society are accepted. So-called eco-knowledge redefines nature as the source of goods (and more recently, services) (Luke, 1995) but also what is considered as harmful to a natural environment constructed through said knowledge, as Luke (1999) also showed, where environmental studies validate particular knowledge and discursive strategies to describe and thus construct nature, legitimizing particular political projects.

In the context of environmental governance and nature conservation, the theoretical framework of governmentality has been well-developed by Robert Fletcher (2010, 2017) in conversation with various other political ecologists. Applying the work of Foucault to the realm of environmental governance, Fletcher (2010) elaborates distinct governmentalities set out by Foucault and how they are relevant to analyzing environmental governance dynamics, complementing the work of Agrawal (2005a, 2005c) and (Luke, 1995) on environmentality. In 1995, Luke proposed the term to account for the "emergence of 'the environment' as a nexus for knowledge formation and as a cluster of power tactics'' (p. 66). Agrawal (2005c) goes on to refine this to consider environmentality as ''an approach to studying environmental politics that takes seriously the conceptual building blocks of power/knowledges, institutions, and subjectivities'' (p. 8). Fletcher (2010) refines the workings and strategies of

environmentality by considering the broader governmentalities as developed by Foucault. These governmentalities do not operate in parallel but rather co-exist and interact in complex ways (Fletcher, 2017).

Firstly, *disciplinary* environmentality considers social actors internalizing social values and norms through which they self-regulate their behavior in ways that are consonant with the State's goals, like altering natural resource use and living in conservation-friendly ways. Referencing Agrawal's (2005a, 2005c) and Luke's (1995) extensive work on environmentality, Fletcher (2010) points to disciplinary methods as being those used to create 'environmental' subjects, or people who care about the environment, through education carried out at various decentralized institutions like NGOs and schools to encourage the preservation of the environment. Secondly, *sovereign* environmentality considers direct control over populations through, for example, force and exclusion. In environmental governance this results in so-called 'fortress conservation' where areas are fenced off for preservation and protection. Thirdly, *truth* environmentality appeals to religious claims or beliefs, about essential characteristics that have shaped human-nature relationality over the course of time, like deep ecology. Finally, *neoliberal* environmentality seeks to create environmental subjects through economic incentivizes. These economic incentives originate outside of the subject (they are not internal norms), they are not understood in terms of morality but rather fit within cost-benefit logics, and they are framed in terms of contributing to economic growth rather than nurturing life directly (Fletcher, 2010). In this sense, neoliberal governmentality produces its subjects as *homo economici* who conceive of themselves as free and autonomous individuals acting in self-interest, navigating the market-based incentives to attain the best outcomes (Hamann, 2009). According to Foucault, this rationality centers around cultivating competition, which does not necessarily refer to financial performance but is relevant to general quantitative differences, where the difference in measures of these quantities are used to regulate and make governing decisions (Dempsey, 2016). In this sense, neoliberal governmentality implies a rationality that aims to ration and optimize scarce resources, creating an enterprising logic where one competes to win. The creation of competitive subjects with internalized environmental logics that seek to optimize their performance fits with green growth proposals that hold that growth can be maintained or even revived "while changing the quality of economic growth'' (Wanner, 2015, p. 27). Foucault (2008) considered economic growth as neoliberalism's one true fundamental social policy (Fletcher, 2010), as "only economic growth should enable all individuals to achieve a level of income that will allow them the individual insurance, access to private property, and individual or familial capitalization with which to absorb risks" (Foucault, 2008, p. 144 quoted in Fletcher, 2010).

2.6 Environmentality and neoliberal nature in the forest

Governmentality and later the multiple environmentalities approach are applied to various contexts concerning the shaping of human interactions with nature. Forestry, as Peluso (1992) pointed out earlier, is the theater in which different actors play out their interests. Through the materialist lens of neoliberal nature and the poststructural lens of governmentality/environmentality, the way actors are shaped in pursuit of 'good' forestry is analyzed.

In addition to exacerbating inequalities and failing to achieve what they set out to do, neoliberal conservation efforts have been criticized as facilitating the maintenance of capitalist hegemony through the creation of neoliberal subjects (Montes, 2019). In their global synthesis of market-based

biodiversity conservation initiatives, Dempsey & Suarez (2016) recognize how such initiatives are often unsuccessful in achieving their objectives but do play a significant role in shaping neoliberal subjects, as its discourse promotes individual responsibility leading social actors to internalize a logic of market efficiency and personal accountability to act for conservation. More recently, Nagle & Vidon (2022) illustrate the ways in which conservation-minded subjects are created in the context of wildlife hunting and conservation, namely through consumer education, the legitimization of trophy animals, the use of identity politics, the positioning of technology as a tool for conservation, and the wearing of camouflage.

In the context of forests in Canada, Baldwin (2003) considers how the construction of a 'forest-nature' motivates a politics of sustainable forestry management and in the process exercises social power. Recognizing materiality and presentation of nature as inextricable, he shows how the historical constructions of boreal forests in Canada can be theorized as exercises of power to consider, whose nature is being represented and protected. He draws on governmentality to emphasize how environmental schemes like the FSC (Forestry Stewardship Council) are not just interesting to approach critically in terms of their distributional outcomes but instead as playing part in a historical process of producing forests through particular knowledge. He illustrates how forests went from being known through statistical methods and growth rates to remote sensing and satellite imaging, with this latter way of knowing producing a forest with thermodynamic properties and carbon sequestration capacity. In a US context, Demeritt (2001) notes how ways of monitoring the human population were transformed to knowing and managing natural resources in the late 1800s and shows how scientific knowledge produced the US forest, as something that exists and could be seen through quantitative methods – e.g. the nation's forests into one quantitative whole. Though these studies offer rich illustrations of the making of forests, their engagement with the simultaneous making of social order could be further developed. Some approaches that are more attentive to the construction of social actors consider social inclusion into nature management schemes to fulfil surveillance purposes (Ambrose-Oji et al., 2002), and the inclusion of women in forestry governance as a recent manifestation of neoliberal environmentality (Gutiérrez-Zamora, 2021). Governmentality has specifically been applied to consider how the shape, contours, and forms of life in forests are produced through discursive processes. Agrawal's (2005c) work has been foundational in considering the shift in forest management from State coercion toward environmentality, or the internalization of environmental norms by local communities determined by particular types of environmental knowledge. Situated in the forests of Kumaon, India, he shows how local communities were made into political subjects who adopt new forms of environmental governance by having internalized new norms, forms of knowledge, and institutions. He coins the term 'intimate government', which compliments the State governing at a distance, to refer to the community becoming the site through which villagers' conduct in the forests and their subjectivities are shaped. Through local institutions, monitoring systems, and community meetings that instill environmental concern and responsibility (Agrawal, 2005a, 2005c).

Critical of the environmentality approach, and Agrawal's development of it, Cepek (2011) engages ethnographically with scientific forest conservation efforts in Zábalo, Ecuador. He substantiates the critique that environmentality approaches fall prey to a top-down logic of subject formation, particularly criticizing the work of Agrawal as considering the production of people who want to preserve the environment without considering the sociocultural forms that contribute to the formation of environmental subjectivities. Reflecting on his work, Cepek (2011) shares that "after nearly a decade of collaborating with the ECP, however, Cofán people remain critical of the work required to produce

scientific knowledge as well as of its overall utility. Instead of instilling exogenous logics, desires, and values in Cofán people, participating in ECP work creates a sense of the strange, burdensome, and indirectly beneficial quality of collaborative projects with scientists and Western conservationists" (p. 508).

2.7 Little space for resistance

The neoliberalization of nature thesis has been critiqued as depicting a totalizing nature that is unable to capture local, situated realities, and seems to subsume nature in the same, predictable way. This materially situated approach is complemented by the environmentality approach, which offers a more fine-grained analysis of power and subject formation in environmental governance (and in the forest). Yet this approach also suffers from critiques regarding its inability to accommodate for resistance of subjects' agency. In this section, I will complement the critique of the neoliberal natures' approach developed previously with similar developments within governmentality literature.

Governmentality approaches are criticized for reaching conclusions that presume the totality of subjectification, and in turn render it challenging to conceptualize resistance to processes of subjectification. For example, analyses taking up this Foucauldian lens may reach conclusions like "neoliberal government is found to be present in the practice of community forestry" (Rosen, 2008, p. 1), foreclosing the possibility of considering other pathways to desirable forestry. Winkel's (2012) review of Foucauldian concepts in forestry policy research further finds that only one of the 39 studies was critical about the concepts used. He argues that many Foucauldian approaches seem to reiterate a hegemonic discourse on colonial forestry or boreal conflicts to shape their analyses and conclusions. By approaching forestry politics through a lens of social suppression, the resistance of subjects to such power is elided – with Winkel (2012) proposing the example of the persistence of traditional forestry practices as a different reading than mere subject formation (see the work of Agrawal (2005). Similarly, concerning discourse analysis in forestry policy more generally, Leipold (2014) finds that scholars tend to focus on the effects of (institutional) discourse on social actors rather than vice versa. Such tendency to overlook different sites of agency in Foucauldian analysis has also been addressed outside of forestry settings, inviting shifts in analytical attention regarding biopolitical dynamics to the role of patient-subjects for instance in biomedical settings (Rose, 2007). Finally, even those working within the more recently developed environmentalities approach (Fletcher, 2017) identify the workings of simultaneous, interacting, conflicting environmentalities by situatiing the subject as produced by said forces.

As opposed to the deterministic approach of neoliberal nature that makes market logics seem dominant and inevitable, governmentality seeks to account for the various and varying (subtle) mechanisms of power and subject formation. Yet the approach suffers similar critiques to the materialist approach of neoliberal nature with regard to its engagement with subjects, namely its monolithic accounts of power that neglect subjects' agency and leave little room for contestation and resistance (Bevir, 2011). Environmentality, in this sense, is said to set the stage for how people can act as environmental subjects, with Luke (1995) considering that "much of what policy wonks do basically boils down to defining, creating, and enforcing discursive regimes of disciplinary truth" (p. 59). In this sense, recalling Foucault's words of governmentality as the conduct of conduct, governmentality intends to create appropriate (eco-) citizens through discursively shaping the conditions through which citizens should make environmental decisions (as rational, calculating beings). Environmental

knowledge and subjectivities are described simultaneously with an outside intervention — usually on the part of the State — into localized perceptions and behaviors (Forsyth & Walker, 2014). The analyses born out of this perspective engage primarily with how such subjects are created, rather than the diversity, agency, and modes of resistance engaged in by populations interacting with these forces.

Scholars have elicited approaches to amend the governmentality or environmentality lens to accommodate diversity, like the previously mentioned multiple environmentalities approach by Fletcher (2010, 2017). Destabilizing the environmentality notion as a decisive, top-down shaper of subjects, Faye (2016) shows how environmentality is not a straightforward analytical lens that can predict the creation of environmental subjects, but rather, in the context of Senegal's Saloum Islands shows how environmental discourse can be used to exclude certain groups (women in his case) and privatize resources for the benefits of few. Erb (2012), too, considers the complexity inherent to considering environmental subjects, focusing his analysis on the notion of 'dissonance' or the conflicting uses of the environment. In a USA context concerning wind energy, Jepson et al (2012) elaborate the existence of various environmental subjectivities like reflexive environmental skepticism which partly accepts prescriptions from ecological modernization without accepting the core claim that innovation is required to attain environmental change. Finally, in the Azores, Silva (2015) also finds that while the State implements conservation efforts through its Sete Cidades protected areas program, these efforts do not necessarily transform local subjectivities. These studies engage directly with the aforementioned shortcomings of the governmentality approach to approaching environmental governance questions, proposing diversity as a way out of the deadlock that analysis can become wrapped up in.

Finally, some scholars working in a Foucauldian tradition do contend directly with critiques on the lack of room for resistance, arguing that Foucault's work carves out a space not just for resistance but also freedom beyond resistance (Fletcher, 2010). Fletcher (2010) quotes Foucault in sharing his vision of this freedom: "And if I don't ever say what must be done, it isn't because I believe that there's nothing to be done; on the contrary, it is because I think that there are a thousand things to do, to invent, to forge, on the part of those who, recognizing the relations of power in which they're implicated, have decided to resist or escape them" (Foucault, 1991 (1978), p. 174). These conceptualizations of resistance, or freedom, take on an independent form, where Foucault also writes that "there is no first or final point of resistance to political power other than in the relationship of self to self" (p. 252). His idea of counter-conduct, developed in early 1978 and arguably replaced by the notion of critical attitude by the end of 1978 (Lorenzini, 2016), is understood as "the will not to be governed thusly, like that, by these people, at this price" (Foucault, 1996, p. 75). The idea of counter-conduct captures the relation between forms of government and resistance that oppose such rationalities or mentalities of government. Death (2010) uses counter-conduct to explore the interrelationship between protests and forms of government that such protests oppose, analyzing particularly the protests against major international summits. He notes that counter-conduct maintains its focus *within* government to see "how forms of resistance rely upon, and are even implicated within, the strategies, techniques and power relations they oppose" (p. 11).

In similar trend, referring to resistance in *The History of Sexuality* in 1978, Foucault writes, "where there is power, there is resistance, and yet, or rather consequently, this resistance is never in a position of exteriority in relation to power" (1978, p. 95-96). In this sense Foucault conceives of resistance and power as co-constitutive and for resistance to exist *within* power, arguably reinforcing this power. The

resistance Foucault refers to in his 1978 lecture requires the individual to reflect on the relations of power they are engaged in, with this reflection birthing resistance through awareness. Later, in his 1982 essay 'The subject and power', Foucault reflects on the goal of his work over the preceding twenty years, as having the objective "to create a history of the different modes by which, in our culture, human beings are made subjects" (Foucault, 1982, p. 777). He elaborates the modes of objectification that make human beings into subjects, like the objectivizing of the productive subject, objectivizing through division (e.g. separating the sick from the healthy), and finally the way people turn themselves into subjects (which the environmentalities literature later elaborates on). Foucault reflects on his use of resistance as a way to research power saying "it consists of using this resistance as a chemical catalyst so as to bring to light power relations, locate their position, and find out their point of application and the methods used. Rather than analyzing power from the point of view of its internal rationality, it consists of analyzing power relations through the antagonism of strategies" (p. 780).

Explicit theoretical elaboration of resistance through a Foucauldian lens is limited, yet some scholars have worked in this direction. Luke, for example, considers nature to be meaningless until "particular human beings assign significance to it by interpreting some of its many ambivalent signs as meaningful to them" (Luke, 1999; Luke, 1996, p. 1). Because nature's meanings are various and contextual, the signification of nature through particular discursive notions (like natural resources, for example) creates the illusion of fitting this multiple and unfixable entity into a discursive container,thus making it manageable while legitimizing particular practices. Luke (1995) discusses how such struggles over meaning in environmental discourse follow from the construction of environmental 'truths' that fabricate disciplinary power over subjects. Elucidating how the Worldwatch Institute in the 1990s reinforced a technocratic and managerial view on environmental issues, so-called eco-managerialism, he juxtaposes fields of contestation through the circulation of different knowledges like deep and social ecology as contesting such eco-managerialist knowledge. Similarly, in other work, Luke (2002) explores Adaptive and Collaborative Environmental Management (ACEM) as a new (in the 1980s and 1990s) way to exercise expert control over said environmental interventions, in the guise of democratic, egalitarian, and participatory environmental management. More recently, Luke (2024) engages with the Environmental Defense Fund (EDF) as a third-sector 'public defender' which presents itself as critical of market-based solutions in environmental governance, but actually reinforces the structures it criticizes by opting for legal environmental protection rather than confronting the root causes of environmental degradation or opting for systemic transformation. Luke's work fits within a trend of Foucauldian approaches that contend with resistance but situate such resistance within dominant and dominating neoliberal ecological regimes. This aligns with Foucault's proposal to "think about resistance differently, as not anterior to power, but a component of it" (Rutherford, 2007, p. 296).

2.8 Co-production to follow meaning

As a way beyond the somewhat rigid application of both the neoliberal natures frame onto environmental governance programs (e.g. carbon credits commodify natural processes and thus neoliberal capitalist expansion is strengthened) and environmentalities as shaping people's subjective experiences in the forest (e.g. community actors are made to care for the forest through financial incentives to sequester carbon), I turn to the way nature and society are shaped to be fit for such incentives. Environmental knowledge does not arise in a vacuum, and neither is it solely a purposeful mode of controlling populations, rather knowledge is produced, legitimized, and travels as a function of human agency, through interactions and alliances of various actors and materials. The idiom of co-

production, as developed by Jasanoff (2004) is particularly productive when orienting one's analytical focus towards the production of knowledge about both nature and society, rather than taking knowledge as unidirectionally applied to social actors and so-called 'natural' phenomena to control or shape them. Co-production maintains that observed facts of nature are refracted through a collective desire for order and logic, which in turn produces authoritative representations of how the world works and should work. The credibility of this knowledge is an equally social and relational phenomenon, made possible through not only its successful application to material arrangements but also the practices through which it is produced, defended and made to travel. This means that epistemic capacity is imbued with a normative authority regarding how society should be organized in light of such ways of knowing.

Drawing together disparate strains of STS literature, Jasanoff (2004) distinguishes two distinct modalities by which co-production can be theorized to consider the interplay of society, science, and technology; constitutive and interactional co-production. Introduced by Latour (1993) in his essay 'We Have Never Been Modern', constitutive co-production concerns the binary that underpins modernity; namely that of two seemingly autonomous worlds 'nature' and 'culture'. This binary, according to Latour, underpins how the world is understood and in turn creates this world. Through a constitutive coproduction lens, inquiry concerns the constructed boundaries between nature and society and what actors are constructed within said actor-networks. Latour elaborates on actor-networks as shifting, heterogeneous assemblages of human and non-human actors whose interactions produce meaning understood through the nature/society binary within Western thought (Latour, 2007). By rejecting this binary, actor-networks can be established to contain human and nonhuman actants, in the case of forestry one can think of chainsaws, trucks, roads, pine trees, earthworms, factory workers, land owners, and so on. While constitutive co-production has meaningfully raised attention to how the boundaries between nature and society are produced and enforced especially to create seeming stability, Jasanoff (2004) has criticized this approach as failing to engage with the moral and political drivers of the constitution and stabilization of these networks. She develops interactional co-productionism, which departs from Latour's more metaphysical approach to instead concern the realm of epistemology, considering not what *is* but rather how knowledge about the world (or said collectives) is negotiated and importantly, with what end. The emphasis from this perspective is on interaction, and investigating how certain representations gain legitimacy over others. Interactional co-production, as Hilgartner et al (2015) write concerns "the conflicts that arise as new, emerging understandings and opportunities for change – including not only new ontological but also new epistemic and socio-political arrangements – interact with existing institutions and practices, and extant cultural, economic and political formations" (p. 5).

Interactional co-production centers the analysis on the way knowledge gains authority by moving and being legitimized in different spaces and by different (even conflicting) actors. In the context of environmental governance, Hajer (1995) uses the term 'discourse coalitions' (p. 65) to refer to how different actors talk about environmental phenomena in the same way, while members have differing "social and cognitive commitments" (p. 14). Through discourse coalitions, an image of the world gains authority while simultaneously excluding others (Forsyth & Walker, 2014). Discourse, which Hajer (1995) defines as "a specific ensemble of ideas, concepts and categorization that are produced, reproduced and transformed in a particular set of practices and through which meaning is given to physical and social realities" (p. 60) is traced to where, how, and by whom it is produced, reproduced, and transformed. In this sense, discourse coalitions may span environmental NGOs, governments,

scientific papers, and news outlets in the circulation of meaning about nature and society. The examination of how this meaning is created and reproduced is what interactional co-production, operationalized through for example discourse coalitions, draw attention to.

Birch's (2021) work on neoliberal bioeconomies substantiates the call for turning towards a co-productionist approach to environmental governance and particularly forestry. In his work he warns against the reductionism implied when approaching processes of neoliberalizing nature as the market being imposed on nature or similar analyses of nature fighting back against this imposition, arguing to rather explore their co-construction. He warns that the characterization of nature as the antithesis to markets "naturalizes the idea that our biophysical world is the starting condition on which we end up acting" (Birch, 2021, p. 51), and rather opts for the investigation of the construction of the 'biophysical world'. Rather than markets being inserted onto a pristine nature existing out there, the processes of forming socio-material configurations that favor certain expressions of fungible commodities like biomass for fuel are worthy of exploration, instead of attributing causality to natural qualities inherent to these products. Recent work in ethnobiology has developed the pretense that human and plant relationships are contingent on specific ways of living, with the field engaging with how these ways of living are derived from and create political possibilities.

The potential for bringing a co-productionist approach to studying human-plant relationships is also reflected by Flachs et al's (2024) recent special issue in the Journal of Ethnobiology, where they propose the concept of plant-anthropo-genesis to highlight the mutual shaping of humans and plants, particularly how plant-people engagements shape agency of plants (Bastos & Heath, 2024). This budding body of research looks through a constitutive co-productionist lens to scrutinize the relationships between humans and plants, emphasizing that plants are not acted upon by humans but are instead made through sociopolitical forces. Yet, arguably, and as characteristic to constitutive co-productionist approaches, this body of work investigates how plants and people are shaped, and what their boundaries are, rather than how they are mobilized in pursuit of visions of how these relationships *should* be.

Building on this literature, and taking up the idiom of interactional co-production, I consider how communities, too, are both constructed as part of the quest for a better *monte*, while simultaneously constructing the knowledge that is foundational to their visions of good futures. Rather than focusing on the practices of knowledge production and subjectification by the state, I examine the ways in which communities are formed and act in dynamic relation to those forces of subjectification, and how knowledge and order in the *monte* are made sites of contestation and resistance. For example, some neoliberal nature approaches are skeptical/critical of the way indigenous people and local communities (IPLC) are treated by environmental governance schemes, yet recommend IPLC participation in biodiversity policy to enhance the social bases needed to meet international biodiversity targets (Reyes-García et al., 2022). I argue that such scholarship would benefit from adopting an interactional co-productionist approach that treats local communities as constructed, in-construction, and constructive, so that environmental scholarship can move beyond schemes of 'inclusion' and instead be sensitive to how actors and communities are shaped (and shape themselves) in pursuit of what imaginaries of desirable forestry.

The interactional co-productionist approach is particularly appropriate to my inquiry into good environmental management in the Galician *monte* as it proposes the following of knowledge across sites (Jasanoff, 2004). Taking a relational approach to knowledge, I consider how knowledge about the

monte is made intelligible and portable across the collectives that I engage with (institutional actors, communities, and activists) and particularly how different ways of knowing the *monte* interact with each other, are contested, negotiated, stabilized, and so on. While a constitutive co-production approach would inquire about the stabilization of networks around 'good' forestry in the *monte*, interactional co-production goes further to also consider how scientific and technical controversies are remedied, the processes through which forestry knowledge is made comprehendible and translatable across sites and actors, and the adoption of cultural practices around the doing of forestry science and knowledge that are appropriate to local contexts. Within these realms, the cognitive, material, social, and normative are entangled and my inquiry is situated within their interactions, rather than solely tracing how networks become to 'be' and what the boundaries around actors are. Interactional co-production proposes that by examining how social order is established both conceptually and institutionally, we might understand how some kinds of actions (or revolutions in the words of Jasanoff) appear instead of others (Hilgartner, 2015; Jasanoff, 2004b).

When it comes to co-production in the forest, Forsyth (Forsyth, 2020; Forsyth & Walker, 2014) has pioneered this area of scholarship. In Forsyth & Walker (2014), the authors explore community forestry in Thailand through the idiom of co-production, also drawing on Hajer's (1995) discourse coalitions, where the authors note the unproductivity and paralysis inherent to analyses that 'simply' oppose community forestry practices with the State. In order to move beyond this deadlock, the authors find that State actors and community organizations uphold authoritative knowledge claims that exclude alternative visions of forestry. In Forsyth & Walker (2014) this occurs as the forest is conceptualized by the State for conservation, with local communities as either destroyers or guardians of the forest, which is a discourse reproduced by environmental NGOs who oppose State control over forests, in the process limiting local communities' interaction with their forests. Similarly, in Forsyth (2020), Thailand's forests are the context in which co-production is used to analyze conflicts over the functions (and meaning) of forests. Engaging with resistance to the proposed Kaeng Sua Ten dam, Forsyth (2020) again emphasizes the importance of considering how knowledge is circulated and becomes authoritative, as protestors against the dam reinforced simplified views of watershed science and community culture. He writes that focusing on "two opposing assemblages conceals the ways that both sides of the dispute reinforce knowledge that is afforded the status of expertise" (p. 1052).

2.9 Sociotechnical imaginaries

Considering how knowledge and social order are co-produced in the Galician *monte* and in contexts relevant to wider forestry and political ecology scholarship provides an alternative reading of power that illustrates how expertise and types of knowledge circulate across distinct contexts. Co-production reminds us that the circulation and validation of knowledge works as a mechanism to order nature and society, enabling and constraining environmental action beyond State versus community forestry. In order to explore the productive and normative dimension of forestry knowledge and social order, the theoretical framework of sociotechnical imaginaries (Jasanoff, 2015; Jasanoff & Kim, 2009) offers the tools to consider how these dimensions are co-produced in pursuit of a desirable future in the Galician *monte*. In this sense, sociotechnical imaginaries (STI) bring a normativity and intentionality to the interactional co-productionist lens to consider why collectives arise, stabilize, crumble, and why certain interactions gain prominence over others. This framework was developed as a response to "the growing recognition that the capacity to imagine futures is a crucial constitutive element in social and political life"(Jasanoff & Kim, 2009, p. 122).

Imaginaries, as pioneered by Anderson (2016) Appadurai (2003), and Taylor (2004), considered imagination as a social practice through which collective beliefs of how society functions arise. In this sense, imaginaries dissolved the notion of a universal, homogenous modernity to instead shed light on how the imagination is a site of negotiation between individual agency and globally defined fields of possibility (Appadurai, 2003). As such, imagination becomes "an important cultural resource that enables new forms of life by projecting positive goals and seeking to attain them" (Jasanoff & Kim , 2009, p. 122). Jasanoff & Kim (2009) consider this body of work to not have considered adequately the central role of knowledge, science, and technology in imaginaries of social order. Simultaneously, Jasanoff & Kim (2009) argue that science and technology have historically been interwoven with politics, rather than a neutral expression of innovation and knowledge for example, and find that the mechanisms through which the changes in science and technology have been studied lack articulation of the role of power. Drawing together scholarship on imaginaries and technoscientific knowledge, Jasanoff & Kim (2009) formulate their theory of sociotechnical imaginaries as accounting for the role of technoscience and knowledge in mitigating the trajectory toward an ideal future in service of an imagined society or "encoding collective visions of good society" (Jasanoff & Kim, 2009, p. 123).

Jasanoff (2015) defines sociotechnical imaginaries as "collectively held, institutionally stabilized, and publicly performed visions of desirable futures, animated by shared understandings of forms of social life and social order attainable through, and supportive of, advances in science and technology" (p. 4). Jasanoff & Kim's earlier (2009) work on imaginaries around nuclear power in South Korea and the United States showed the way this technology embodied accepted visions about progress and national identity. Later work acknowledged the situatedness of imaginaries, seeing them as "collective, durable, and capable of being performed" while "temporally situated and culturally particular" (Jasanoff, 2015, p. 4). This addition to the theory of sociotechnical imaginaries opened up the space for looking at the myriad visions of technology and science, entering into assemblages of materiality, meaning, and morality. While at first glance, sociotechnical imaginaries' consideration of technological visions may make forestry seem a stretch – unfit due to the lack of seemingly obvious technological dimensions – Jasanoff (2015) has noted the need to engage with this theory in areas outside the laboratory. In their 'Dreamscapes of Modernity', Jasanoff & Kim (2015) engage with various sites of constructing and negotiating sociotechnical imaginaries, like daily life practices, media outlets, and social movements.

Yet, even though the articulation of sociotechnical imaginaries recognizes the need to engage with multiple sites where imaginaries are reproduced, articulated, negotiated, and so on, to date, the focus of studies using the theoretical framework of sociotechnical imaginaries focus primarily on expert discourses as reflections of collective visions of society's ideal organization. While Jasanoff & Kim's (2009) framework sheds light on how the pursuit of a better future through advances in technology and science contain normative commitments with regard to how social life should be ordered, the way studies employing the framework engage with said normative commitments tends to be through engagement with expert discourse. In their original cross-national comparison of sociotechnical imaginaries, Jasanoff & Kim's (2009) found that in the US the containment of nuclear energy (through expert knowledge, minimization of risk, and so on) sought to contain public anxiety while in South Korea, the development of nuclear energy represented national progress and the public, while increasingly skeptic of nuclear energy, continued to understand science and technology as empowering the nation. Other studies using the sociotechnical imaginaries framework set forth the trend of contending with an imagined society within technoscientific developments through engaging with

those who are developing technologies or the State (e.g. Jasanoff & Kim, 2013; Olbrich & Witjes, 2016; Richter et al., 2023; Wang et al., 2023).

While scholars repeatedly point to scientific and technological developments as serving a desirable future for society, or "how that society imagines its future" (Hendriks et al., 2025, p. 2), reviewing existing studies begs the question (taking an alliterative stretch): how do such works imagine imagined people's imaginaries? If visions of society and how society *should* be organized are held by people in various places and spaces, where some visions gain traction over others, are reproduced, change form slightly, and so on, then work on sociotechnical imaginaries could gain necessary breadth by engaging with these often overlooked sites. Indeed, as Strauss (2006) reflects about work on imaginaries, the focus should be on "imaginaries of real people, not the imaginaries of imagined people" (p. 339) and continues that "studying real people will help counter the tendency to see imaginaries as more homogeneous or fixed than they are" (p. 339). Current frameworks for analyzing sociotechnical imaginaries often privilege expert and institutional narratives as normative representations of national identity, neglecting the contested, heterogeneous perspectives emerging from grassroots communities and subnational actors. Such approaches risk flattening pluralistic realities into monolithic, state-sanctioned (or industry devised) visions, sidelining the dynamic tensions and localized renegotiations that shape sociotechnical futures.

Jasanoff & Kim (2015) have eloquently written that:

> "it would be naïve, too, to think that there are unique imaginaries guiding the production of knowledge or knowledge-based technologies in the contested spaces of democratic policymaking. Yet, of the multiple contending sociotechnical imaginations at play in any society, some tend to be more durable at the national level because powerful instruments of meaning-making and goal-selecting often lie within the control of nation states (e.g., political campaigns, state controlled media, official policy narratives and instruments)" (p. 123-124)

In this sense, through interactional co-production the tracing of forestry imaginaries in this thesis straddles community visions, activist visions, and State visions to consider how imaginations and visions interact, strengthen or contest each other, and relate to knowledge and practice. Like Davoudi & Machen (2022) argue, to fully understanding imaginaries, it is essential to consider the diverse mediums through which they are shaped – an interplay of material, infrastructural, discursive, and practice-based elements that mediate their construction and expression. Mager & Katzenbach (2021) echo such observations by emphasizing that imaginaries are multiple, contested, and commodified rather than monolithic, linear visions of future trajectories enacted by state actors. Yet such studies still largely focus on how an institutional imaginary is translated from tech companies toward public institutions who are tainted by these private parties' rhetoric, technologies, and business models which condition how the future (and future society) is conceived of. Considering the way visions co-exist and are strengthened through knowledge practices destabilizes the way the future (of forestry for example) is thought about, considering instead how forestry seeks to serve society as articulated by different actors. Studies using the theoretical framework of sociotechnical imaginaries typically center on expert discourses as the core of collective social visions. This leaves considerable room for this thesis to explore how visions of forestry interact with materiality and meaning across different sites of knowledge (re)production, so that imaginaries can be considered in their malleability and as

encapsulating space for resistance, contestation, and negotiation – something previously revised approaches to environmental/forestry governance fall short of.

To consider how sociotechnical imaginaries are articulated outside of expert spaces with regard to the Galician *monte*, it is useful to inquire into multiple, co-existing imaginaries or visions and consider how some gain traction over others. Jasanoff has written (2015, p.4) that "multiple imaginaries can coexist within a society in tension or in a productive dialectical relationship". Looking into imaginaries of the Galician *monte* and how social order and natural order are co-produced in pursuit of desirable futures becomes an endeavor that considers how different imaginaries or visions reproduce, contest, and interact with each other. Indeed, Tidwell & Tidwell (2018) identify this shortcoming of current studies of sociotechnical imaginaries, pointing at the messiness and variation found within individual perspectives within local communities that is overlooked when foregrounding expert perspectives as standard, normal, and institutional perspectives of entire nation-states. To remedy the limitations of the prevailing focusing on dominant or hegemonic imaginaries, Longhurst & Chilvers (2019, p. 974) call for engagement with "distributed, diverse, and counter-hegemonic visions." A particularly fruitful, yet not widely popularized approach within work on sociotechnical imaginaries, is that of 'vanguard visions'.

Vanguard visions are intentions to reorder the world that originate and are shared within small collectives or even by individual actors, and have not (yet) risen to the status of an imaginary (Jasanoff, 2015; Jasanoff & Simmet, 2021). Sociotechnical imaginaries are defined as institutionally stable and collective, yet scholars have raised concerns about the way approaching them in this manner creates the illusion of unity, while actors who are in the same collective still do have divergent views on the same issues. The same is true for vanguard visions, where some are taken up by broader publics, undergo subtle shifts or even radical transformations through ongoing, multi-actor processes. What is needed, therefore, is a more dynamic perspective that explores how visions of the future are co-produced alongside the groups that promote them (Hilgartner, 2015). In their recent review of the use of 'collective' within research on sociotechnical imaginaries, Kuchler & Stigson (2024) also call for more critical engagement with the concept and how certain imaginaries gain traction over others to become 'collective'. They call for more careful consideration of factors that constitute collective identities often obscured when approaching large wholes as homogeneous; instead, they call for considering the role of individuals and small collectives in shaping and reshaping sociotechnical imaginaries. Thinking in terms of vanguard visions – and how they sit in relation to existing, stabilized sociotechnical imaginaries – offers a way to understand nascent processes of change, and meaning-making on the part of small collectives and individuals without presuming these visions to be institutionalized and in turn privileging stability in my analysis.

My inquiry into imaginaries of the Galician *monte* and indeed vanguard visions of smaller, internally diverse yet united collectives, thus takes an interactional co-productionist approach to consider how knowledge is negotiated between different actors and sites. In this sense, processes of change in the *monte* can be better understood. Yet, imaginaries do not appear and disperse out of thin air onto a blank landscape, instead they encounter material and meaning that are negotiated in pursuit of better futures. Jasanoff & Kim (2015) have articulated that imaginaries are not just durable and collective but also situated and temporal. The Galician *monte* plays an important role in institutions and collectives today articulating their hopes and fears for the future, and through the aforementioned theoretical approaches I seek to consider these imaginaries, but how can such an endeavor be undertaken without

taking into consideration past developments and past hopes and fears? Turning to existing work on imaginaries, temporality is referred to as important to understanding and situating sociotechnical imaginaries (Jasanoff & Kim, 2015) yet few studies actually go about tracing historical imaginaries. In their recent literature review on the use of the concept, Hendriks et al (2025) find that less than 10 from the reviewed 306 studies examined historical imaginaries. These two studies consider imaginaries of future African wildlife in the 1960s (De Bont, 2020) and imaginaries of future electricity in Victorian Britain (Kapoor, 2019).

2.10 Sociotechnical imaginaries in the forest

The sociotechnical imaginaries framework has more commonly been used to study more self-evidently technological projects like energy (Jasanoff & Kim, 2013; Jasanoff & Simmet, 2021; Longhurst & Chilvers, 2019; Rudek, 2022; Tidwell & Tidwell, 2018), artificial intelligence (Brause et al., 2025; Richter et al., 2023; Wang et al., 2023), biotechnology (Bain et al., 2020; Doezema & Hurlbut, 2017; Jasanoff, 2006; S.-H. Kim, 2014). While the framework was developed with explicit sensitivity to the need to take visions of the future out of the laboratory and instead follow meaning across sites where they gain legitimacy and power, its application to nontechnical areas, like forestry, remains limited. Some scholars have endeavored upon this task, with forestry mainly been investigated in relation to bioenergy.

Studies using sociotechnical imaginaries in the forests contemplate the way forests are imagined within bioeconomy futures, as carbon sinks or biomass (Christiansen & Carton, 2021), producers of cellulose for bioenergy (Kuchler, 2014), or timber for low-carbon urban transformations (van Veelen & Knuth, 2024). While these authors problematize the way forests are conceptualized in pursuit of different imaginaries, their inquiry unanimously departs from bioenergy visions that implicate forestry, rather than addressing the forest as the primary site of knowledge production, political construction and space of imagination. Holmgren et al (2020), for example, extensively engage with forest-bioeconomy imaginaries through an extensive literature review of social science studies concerned with forest-based bioeconomy developments. They identify, what they consider to be three imaginaries as guiding existing research:

1. The forest-based bioeconomy as a way to decarbonize and maintain economic growth
2. The forest-based bioeconomy as a potential pathway towards sustainability
3. The forest-based bioeconomy as a fundamental societal transformation

The authors critique the homogeneity of these so-called imaginaries as reinforcing the dominance of existing bioeconomy strategies, involving fossil independence, economic growth, and global competitiveness. Arguably, following Jasanoff & Kim (2015) and Sovacool et al (2019) these three ways to seeing the bioeconomy hint more at technological expectations that are embedded within larger imaginaries than actual imaginaries, as the latter are less instrumental and more expansive. Holmgren et al (2020) call for the need to explore different imaginaries by engaging with diverse actors beyond policy and scholarship, and with more diverse social science disciplines to get at truly different imaginaries of the forest-based bioeconomy. Their paper, as their objective makes clear, takes the forestry-bioeconomy link as given, equating forestry with the bioeconomy and in this sense foreclosing other visions of forestry. By engaging with different sites of knowledge (re-)production, I seek to broaden how forestry is imagined, going beyond policy visions that seem to form the subject of analysis of aforementioned studies and particularly Holmgren et al's (2020) work, taking knowledge about the forest as the subject of my study. In this sense, forestry is contained within imaginaries about what

nature is, what it should be, what an ideal society is imagined to look like – becoming both a way to attain such a future and the site where these ideals are put into practice. Forestry thus becomes more than an input for the bioeconomy, which arguably resembles more a policy vision or objective than an imaginary, and more an exercise of power.

A paper that does consider the making of forests through a sociotechnical imaginaries lens, and attention to ways of knowing the forest, is Gabrys et al's (2022) recent work where they use the STI framework to consider how digital technologies actively shape forests with distinct political and material repercussions. They identify five digital operations that co-constitute forests, technologies, subjects, and social life, namely observation, datafication, participation, automation, and regulation and transformation. These five operations interact to sense and classify forest data, shape what it means to participate in forestry governance, optimize desired forestry management, and ultimately transform forest environments. Their paper argues for the need to incorporate more pluralistic engagements with forests through considering diverse perspectives like those of communities and indigenous peoples. Gabrys et al (2022) argue that "the digitalization of forests requires questioning the political in political forests to work toward more pluralistic and cosmopolitical forest engagements" (p. 74), requiring a more open approach to considering how care for forests is imagined beyond said digital technologies. My involvement with various actors and sites in this thesis responds to such calls, where the way the *monte* is imagined and known is followed across places. This enables different forms of knowledge to be studied and experienced, which sheds light on how imaginaries circulate and gain traction.

Previously discussed work on sociotechnical imaginaries has stressed the need to engage with different sites of knowledge (re-)production and the way multiple visions or imaginaries co-exist with each other, an intention that fits well with what is lacking within scholarship employing the sociotechnical imaginaries framework in the realm of forestry. These studies have tended to focus on bioenergy-relevant discourses and expert-based knowledge.

The need for sociotechnical imaginaries work to engage with temporal elements of developing sociotechnical imaginaries has been noted earlier and also reflects a gap within existing work on forestry and sociotechnical imaginaries. A recent literature review by Hendriks et al. (2025) surveyed 306 publications employing the sociotechnical imaginaries framework and systematically classified their methodological and conceptual approaches. Within this corpus, only three studies directly addressed forestry, including the previously cited work by Holmgren et al. (2020) and the study by Hitchner et al. (2017), both of which examine forestry in relation to bioenergy. In the third study, Hecht & Rajão (2020) undertake a historical tracing of how the Amazon rainforest has been imagined over time, arguing that "the rapid transformation of the Amazonian landscape from the 1970s onwards cannot be understood without making reference to the increasingly scientized basin-wide land use models and development schemes that emerged from the 1920s" (p. 10). They focus on how land use models represented and 'made' the Brazilian Amazon, showing particularly how representation shifted perceptions of the Amazon from a stagnant 'Green Hell' as an unknown and invincible jungle to the 'Legal Amazon', a tabula rasa available for new forms of development through predictable, calculable, and legible ways.

As this section has shown, existing work on sociotechnical imaginaries and forestry is scarce and rather conditioned by forestry's role in the bioeconomy and bioenergy. Hecht & Rajão's (2020) work is a

relevant antecedent to this thesis, one which I will be in conversation with as I seek to recount the historical making of the *monte* and investigate the way its materializations are negotiated today.

2.11 Conclusion, objectives, and key contributions

Interactional co-production provides a way for current environmental analyses about forestry to move beyond the somewhat totalizing characteristic of neoliberal natures and environmentality approaches that are commonly employed to criticize the neoliberal governance of nature. In order to meaningfully engage with resistance, or community action beyond neoliberal governance, I have argued for the use of interactional co-production to follow knowledge across different sites and engage with different actors. In so doing, I engage more profoundly with the conceptual and institutional foundations of existing social order (Hilgartner, 2015) to understand how governance in the *monte* is shaped and how community responses engage with historically shaped material and meaning. In this concluding section I sum up what I consider the main contributions this thesis makes to the aforementioned literatures in response to the following refined research objectives:

To critically investigate how a desirable future for, and through adequate governance of, the Galician *monte* is imagined and enacted by different actors, with particular attention to how knowledge mobilized in pursuit of such imaginaries reflects and promotes ideas of how nature and society should be organized.

a. To deepen understanding of contemporary imaginaries of desirable futures in the *monte* by considering the way institutional imaginaries have evolved over time.
b. To investigate how nonexpert vanguard visions of a desirable *monte* interact with dominant institutional imaginaries.
c. To consider how knowledge and practices mobilized in pursuit of these visions/imaginaries articulate and sustain normative visions of how nature and society should be organized.

The aforementioned objectives develop the questions asked in section *1.4 Contributions* through dialogue with the aforementioned relevant bodies of literature. In this sense, my inquiry into attaining a desirable future in the Galician *monte* is refined to bring about new insights to scholarship that has approached such issues.

Moving from State/communities dichotomy to negotiation of imaginaries

This work contributes to political ecology approaches that employ the lens of environmentality and/or neoliberal natures to consider interactions between the State and communities in forests (and other natural resources settings). These studies have been critiqued as often foreclosing the ability for local communities to meaningfully resist State forces (e.g. Leipold, 2014; Winkel, 2012), and some meaningful attempts have been made to account for the diversity in subjectification that such interactions bring about (e.g. Fletcher, 2017). By introducing the notion of interactional co-production and sociotechnical imaginaries to these ambits, I seek to circumvent the deadlock of how powerful State (and corporate) discourse and action shapes communities as appropriate subjects, to instead venture into how communities and other relevant actors draw on and negotiate different imaginaries through different epistemic resources. In this way, I consider how communities construct their visions of what the *monte* should be in relation to institutional imaginaries without giving these imaginaries precedence over local actors' visions. By focusing the analysis on the way knowledge is mobilized in pursuit of particular imaginaries, and subsequently moves across sites, I explore a way beyond the

dichotomy of State versus communities. Within this endeavor, my thesis makes two related contributions – namely to do with temporality and diversity of imaginaries.

A) Negotiation of imaginaries over time

By considering negotiation of imaginaries rather than dichotomic thinking of State versus communities and their subjectification, I contribute meaningfully to existing work on sociotechnical imaginaries and political ecology of forestry, firstly, by developing a historical perspective. By examining how the *monte* has been shaped over time, I answer calls within sociotechnical imaginaries' literature on the importance of considering temporality (Hendriks et al., 2025; Jasanoff & Kim, 2015) and also investigate the fruitfulness of considering historical contingency to understand environmental governance today. In this way my study loosens the deadlock that environmentality and neoliberal natures approaches can be considered to be stuck in (Forsyth & Walker, 2014), by examining the way knowledge is mobilized, produced, and reproduced by different actors beyond solely today's neoliberal developments. Thus, this thesis directly addresses the shortcomings regarding the totalizing character of both neoliberal natures and environmentality in engaging with subject formation and the construction of nature, through a historical perspective. As Foucault argued, "we need a historical awareness of our present circumstance" (Foucault, 1982, p. 778). By tracing interacting imaginaries over time within institutional realms, along with local communities and experts, today's situation in the *monte* can be understood in a fuller sense, opening up avenues for potentially different readings and proposals for forestry governance.

B) *Negotiation of imaginaries across diverse actors*

The second way in which I loosen dichotomic thinking between the State and communities in work on forestry, to meaningfully contribute to work on sociotechnical imaginaries and political ecology, is by considering the way sociotechnical imaginaries are reproduced and negotiated by various actors. This endeavor responds to calls within sociotechnical imaginaries work to move beyond the often narrow focus on expert discourse (Jasanoff, 2015; Longhurst & Chilvers, 2019; Tidwell & Tidwell, 2018). This narrow focus has arguably led to accounts of imaginaries without actually engaging with those whose imaginaries are being described and approaching them as homogenous wholes (Kuchler & Stigson, 2024). Through the notion of vanguard visions (Hilgartner, 2015), my inquiry considers nascent processes of change, where smaller collectives' visions interact with institutional imaginaries and are also informed by different epistemic resources. By drawing attention to how such visions and imaginaries interact, and the role of knowledge in this process, the State/community dichotomy is loosened and diversity in subjectification and practices can be considered in pursuit of different imaginaries/visions of what the Galician *monte* is and should be.

Finally, my thesis contributes valuably to political ecology scholarship by loosening up the North/South distinction within work on forestry issues. Critiques within this field of scholarship consider forestry practices in the Global South to be modeled upon Northern, industrial approaches, thus excluding local indigenous knowledge and viewpoints (Agrawal, 2005c; Peluso, 1992). Issues of poverty, political instability, difficulties in enforcing the law, corruption, and violence are more commonly considered in forestry studies in the Global South than they are considered as shaping Global North forests (Hayter & Barnes, 2012) and while this distinction is made with caution by Hayter & Barnes (2012), studies around forestry in Global South countries do tend to name such issues. Global North forests are considered more advanced in terms of industrialization, with Mather (2000) describing the transition from pre-industrial to post-industrial as follows:

> "In the 'pre-industrial' forest, products are diverse, including food, medicines, fodder, fuelwood and wood and timber for utensils, implements and construction. In essence the forest is often a de facto common-property resource, whatever its de jure status may be. The 'industrial' paradigm is characterized by the primacy of timber production as the management objective, and the forest is usually under private control (i.e. it is either privately owned or operated as a concession). In several European countries, the forest-area transition was accompanied by a shift towards the 'industrial' forest paradigm. In the 'post-industrial' paradigm, the primacy of wood production as a management objective weakens, as environmental benefits such as nature conservation and recreation are increasingly sought. Typically, some form of public regulation is imposed on management, or incentives are offered for forms of management perceived as desirable." (p. 4).

As illustrated by Mather (2000), the transition from pre-industrial to post-industrial forestry is assumed to go accompanied by a change towards private property, resounding various studies documenting local communities struggling against the State and private business (Agrawal, 2005b; Poudel et al., 2015; Rosen, 2008) in pursuit of a trend associated with the Global North. Such approaches to forestry assume a linear trend of development towards a model of forestry already popular in the Global North.

The Galician context appears different from what scholarship on forestry issues assume such trends to be. As opposed to the assumed movement towards private property, the reality lived in Galicia continues to be characterized by common property – where one fourth of the territory is considered common lands. This provides a very interesting context to complement and shake up existing research on forestry considered characteristic to the Global North. Furthermore, in the context of neoliberalization of forests in the Global North, Hayter & Barnes (2012) write that "pervasive and systematic physical violence is rare, but sporadic outbursts of aggression certainly occur" (p. 203) as opposed to Global South counterparts. The Galician case offers a different reading to what is often considered as a homogenized Global North, where internal violent displacements at the hands of a dictatorial state did indeed take the form of pervasive and systematic violence.

In this sense, my work joins calls from political ecologists like Mignolo (2011) and Escobar (1995) who have, amongst others, critiqued the North/South binary as continuing Western hegemony, portraying the South as deficient and often on its way to being developed 'like the North'. Such political ecology critiques resonate with what various studies of forestry and conflicts between communities and the State find in Global South contexts and my work shakes up the binary further by providing an in-depth inquiry into the Galician case; showing the North-South binary to be of limited explanatory value.

3. Methodology

3.1 Introduction

In order to consider what constitutes a desirable future for, and through adequate governance of, the Galician *monte*, in this chapter I will stipulate a fitting research design. I will first lay out the research paradigms that are commonly considered in social science research, to then elaborate on the interpretivist/constructivist paradigm which is most suited to study sociotechnical imaginaries, after that I will elaborate on the research design, the field sites selected and rationale for selecting them, methods through which data was gathered, a reflection on methods used, how the data was analyzed, and conclude with a reflection on ethical considerations and quality criteria.

3.2 Research philosophy

3.2.1 Research paradigms

The selection of a research paradigm – the underlying approach to studying and analyzing a phenomenon – fundamentally shapes how knowledge is generated, as well as the methods used for data collection and analysis (Rehman & Alharthi, 2016). The significance of research paradigms in social inquiry was brought to the forefront by Thomas Kuhn's influential work, *The Structure of Scientific Revolutions* (1962). Kuhn illuminated the foundational beliefs that underpin scientific practice and described how these beliefs are periodically contested and replaced, resulting in paradigm shifts. Although Kuhn's analysis was rooted in the natural sciences and philosophy, his concept of paradigms and their guiding belief systems has had a profound impact on social science research as well. Guba & Lincoln (1988, 1994, 2005) were instrumental in adapting and expanding the paradigm concept within the social sciences. Initially, they identified three primary paradigms: positivism, post-positivism, and constructivism.

Today, the literature discusses a range of paradigms, including positivist, post-positivist, constructivist, interpretivist, transformative, emancipatory, critical, pragmatic, and deconstructivist approaches (Mackenzie & Knipe, 2006). The more common research paradigms are positivist, interpretivist/constructivist, transformative, and pragmatic paradigms. Positivism holds that the social world can be studied like the 'natural world'; through observation and measurement, particular truths can be discovered which hold true in various contexts (objectivity). Interpretivism holds that reality is situated and seeks to understand the subjective experience of particular humans (Guba & Lincoln, 1988) and constructivism too, holds that reality is socially constructed (Mertens & McLaughlin, 2004) considering how theory leads from data generated by the research like grounded theory (Glaser & Strauss, 1967; A. Strauss & Corbin, 1990). The transformative research paradigm, before known as the emancipatory paradigm (Mertens, 2009), provides a necessary additional avenue to existing paradigms concerning the participatory role of researchers in contributing to social change. This paradigm integrates commitment to social justice, the inclusion of marginalized voices, and the challenging of oppressive power structures – calling for ethical reflexivity in research practice (Mertens, 2007). Finally, the pragmatic paradigm prioritizes the practical consequences and usefulness of research, emphasizing action, problem-solving, and the value of inquiry grounded in human experience (Dewey, 1925, 2008; Morgan, 2014). Rather than adhering strictly to questions of ontology or epistemology, pragmatism encourages researchers to select methods that best address the research question within its specific

context, focusing on 'what works' while understanding that knowledge is always provisional, contextual, and oriented toward practical effects.

The four main paradigms are summarized in the following table (Mackenzie & Knipe, 2006).

Positivist	**Interpretivist/ Constructivist**	**Transformative**	**Pragmatic**
Experimental Quasi-experimental Correlational Reductionism Theory verification Causal comparative Determination Normative	Naturalistic Phenomenological Hermeneutic Interpretivist Ethnographic Multiple participant meanings Social and historical construction Theory generation Symbolic interaction	Critical theory Neo-marxist Feminist Critical Race Theory Freirean Participatory Emancipatory Advocacy Grand Narrative Empowerment issue oriented Change-oriented Interventionist Queer theory Race specific Political	Consequences of actions Problem-centered Pluralistic Real-world practice oriented Mixed models

Table 1: Paradigms and inquiries associated with each paradigm (from Mackenzie & Knipe, 2006)

3.2.2 Interpretivist/Constructivist paradigm

Inquiring into sociotechnical imaginaries is an endeavor situated within the interpretivist/constructivist paradigm. This paradigm considers that the world does not exist 'out there' independent of our knowledge of it; rather it is constructed through acts of meaning-making (Grix, 2004). The approach to research rejects the notion of a universal truth to instead embrace multiple realities that are socially constructed. In this sense, interpretive methods provide insights into "larger social structures" (Charmaz, 2006, p. 129) while also understanding social phenomena in their contexts (Cohen et al., 2002), with sociotechnical imaginaries, specifically concerning such translations with sensitivity to the role of knowledge.

While interpretivism and constructivism are very similar, and are often used interchangeably by scholars (Schwandt, 1994), they are distinct (Chen et al., 2011; Parsons, 2010; Van der Walt, 2020). Interpretivism is a research philosophy that considers the examination of meaning-making through signs and symbols that reveal meaning (Van der Walt, 2020), with Parsons (2010) elaborating on interpretivist constructivism as approaching social reality shaped through collective meanings that do not point to an 'objective' world existing behind such meaning. This resonates with Van der Walt's (2020) elaboration of what he considers two visions around the status of facts, where one group adhering to interpretivism accepts the existence of facts (conscious of deeper issues behind such facts) and the other group considers all facts to be a product of a series of interpretations of underlying assumptions or "things appear differently to the same perceiver at different times and under different conditions, and differently to different perceivers, so that no appearance can be regarded as definitely representing how anything really is" (p. 62). The way meaning-making is approached through interpreting symbols and signs hinges on the involvement with different voices, where both the

researcher's voice – influenced by background, perspectives, experiences, and so on, research participants, and the research's readers play a part in how such interpretation ultimately unfolds. Van der Walt (2020) refers to Huyssteen (2006) to propose that various interpretations be seen "as alternatives and not necessarily as competing or conflicting" (p. 64). In this sense, research within this philosophy ascribes a central role to researcher reflexivity to consider how meanings are interpreted and made, making interpretivism an epistemological stance.

While interpretivism concerns the understanding of subjective meanings (principally an epistemological endeavor), constructivism emphasizes that meanings are relationally constructed. Constructivism considers reality as created through interactions, specifically through shared ideas and norms (Berger & Luckmann, 1966). This theory considers how macro-level constructs, like institutions and social categories, and individual meaning are made through social interactions (Kim, 2001). While non-constructivist approaches like behavioralism, rationalism, or Marxism hold that our actions are shaped by structures like geography, class, and resources, constructivism emphasizes the role of interpretation in human action (Parsons, 2010). Constructivism is the foundation of a broad array of arguments and theoretical frameworks that consider humans to arrive at certain actions due to their adoption of particular social constructs to interpret their world. Parsons (2010) elaborates on the theories of socialization, bricolage, and persuasion as guiding the shaping of social constructs.

The theoretical framework of sociotechnical imaginaries used in my work employs social constructivism and interpretivist notions to consider that social realities are not pre-given or fixed, but are continuously co-produced through the dynamic interactions of technology, society, and power (Jasanoff, 2004). Following co-productionist thinking, the social is as much a product of the 'world' as it is its precursor, and the two can never actually be separated into explanatory, predictive variables. In this thesis I inquire into their co-production, specifically considering how social and ecological actors are imagined in pursuit of desirable futures and how this imaginary reflects and contributes to desirable ways of organizing the *monte*. My account seeks to avoid the pitfalls of ontological relativism which is sometimes associated with constructivist accounts of multiple realities, e.g. there is no reality beyond what each person experiences in their mind (Willig, 2016), by considering shared, institutionally stabilized imaginaries that are enacted in material practices and traverse mindscapes, in addition to exploring vanguard visions originating in smaller collectives. Especially the consideration of vanguard visions involves probing "the nature of structure-agency relationships through inquiries into meaning making" (Jasanoff & Kim, 2015, p. 35). Furthermore, sociotechnical imaginaries exceed individual processes to become collective sense-making endeavors, and through interpretive methods the co-constitution of these visions of the future and the shaping of social life are investigated (Hendriks et al., 2025).

The sociotechnical imaginaries framework draws on a rich body of work that engages with imagination, like Benedict Anderson's 'Imagined Communities' which defines the nation as an "imagined political community" (Anderson, 1983; 2016, p. 6) and Charles Taylor's work on changing imaginaries and modernity. Taylor (2004) considers society's moral practices and their relation to social order as changing over time, and considers imagination through shared understandings of what is real, considering the relation between these understandings and the concomitant ordering of social life. Jasanoff (2004) and Jasanoff & Kim (2015) have noted how previous work on imaginaries has lacked a material dimension and serious engagement with science and technology, which the sociotechnical imaginaries framework seeks to apport.

3.3 Research design

3.3.1 Comparison built into research design

Imaginaries refer to the collective beliefs about how society functions, positioned within interpretive social theory (Jasanoff & Kim, 2015). Turning to imaginaries allows for differences between nations, groups, or other collectives to be investigated and appreciated in their diversity rather than assuming a predictable link between the social and the technological. Imaginaries are not fixed, contained entities but rather they are fluid, mutable, and translatable. In order to identify them and their workings in the world, STS scholars propose several tools for nterpretive research designs, an important one being that of comparison.

In order to investigate the way social actors produce and indeed perform visions of the collective good, Jasanoff & Kim (2015) propose working in a comparative manner. Their reflection on Ezrahi's (1990) seminal work on democracy and the performances of scientific knowledge notes his lack of specificity when comparing European and United States cultural predispositions to technology. The uniformization of European views on technology erases differences between countries regarding their respective trajectories around the role of science and technology in political culture, for example (Jasanoff & Kim, 2015). They instead draw attention to the subtle yet determining differences between national imaginaries, that reflect differences between such nations.

In *Designs on Nature*, Jasanoff (2007) draws on comparison to elucidate how national and regional debates about biotechnology are situated within wider political realignments. Following poststructuralist thought, entities such as ‘science’, ‘state’, or ‘society’ are no longer a-priori considered as containing a stable meaning but rather become historically situated, contingent, and dynamic constructs which are explained by and can explain developments in different societies (p. 19). Through comparison such concepts can be denaturalized, traced and explained as they are mobilized in different ways to fit within social structures.

To explore imaginaries in the *monte* I follow these scholars’ encouragement to investigate the formation, popularization, and institutionalization of sociotechnical imaginaries beyond the nation state, by considering smaller collectives like social movements and local groups (Hilgartner, 2015; Jasanoff, 2015) with sensitivity to historical contingency (Jasanoff, 2007). In this sense, the (re-) production of imaginaries of the Galician *monte* is considered in both multi-sited and temporal sense. Following Foucauldian thought, “it is important to examine the historical matrices that have enabled the emergence and continuation of these discourses, subjects and knowledge” (Fadyl & Nicholls, 2013, p. 25). Imaginaries that shape how the *monte* is thought of and experienced today hinge on historical moments, and without considering such connections today’s situation might not be understood as such. While Jasanoff & Kim (2015) have noted how tracing historical imaginaries is important, very few studies have undertaken this task (Hendriks et al, 2025), leaving particular room for tracing interacting and successive imaginaries as laid out in the literature review. In order to explore how imaginaries are negotiated, contested, opposed, and reproduced, the historical identification of different sociotechnical imaginaries and the forms of knowledge these rely on and legitimize are productive in understanding how communities imagine the *monte* today.

In this thesis I mobilize comparison temporally and spatially. Following a constructivist approach to knowledge, through historical tracing I show how today's imagined possibilities in the *monte* are epistemically and ontologically co-produced. Through a historical analysis comparing dominant imaginaries, I explore how imaginaries are enacted and by whom to order the *monte* and its living constituents into particular configurations of relationality. Understanding how these arrangements shape the landscape that I engage with in my case studies, is foundational for subsequent analyses of how commoners and *Brigadistas* in the *monte* today draw on and negotiate sociotechnical imaginaries. These sociotechnical imaginaries are collective and not only exist in parallel and overlap with one another, but also draw my research subjects into relationality with larger collectives (Jasanoff & Kim, 2015). By tracing the legitimization of institutional structures over time and how they are positioned vis-à-vis the *monte*, I engage in the comparative work of considering how accepted categories of actors, their rights and responsibilities, have been constructed over time (Jasanoff, 2007).

In addition to historical document analysis, comparison was built into my research design when considering how knowledge is mobilized in various sites of constructing the *monte*. I engaged with a wide range of actors in this study, with an interest not only in their construction of the *monte* but equally in their construction of themselves as social actors in relation to the imaginary of the *monte*. In order to understand how social and natural entities like 'the state' (or 'the *monte*') function in the world, Jasanoff (2007) proposes inquiry into how diverse actors use and understand such concepts. The comparative work I engaged with across various sites served the identification of how imaginaries are contextualized, through what practices and performances they are strengthened, how similarities and differences are explained between self-defined heterogeneous actors, and how actors are woven together in a collective endeavor of imagining the *monte* and its role in social wellbeing. Thus, this comparative research design serves both to explore how framings of the *monte* have evolved over time and how the imaginaries at work in the *monte* are contested in different settings today.

In order to delve into the construction of meanings within research sites I relied on muti-sited ethnography (Marcus, 1995). Refusal for grand narratives within STS makes ethnographic research an appropriate methodological choice to explore how sociotechnical imaginaries are contested in local spaces. Through ethnographic research methods, I engage with various different sites across Galicia to explore how imaginaries of the *monte* are enacted by different actors.

3.3.2 Multi-sited ethnography

In order to explore the different facets of the institutional imaginary of the *monte* and diverse, situated visions, I conducted a multi-sited ethnography. Marcus (1995) introduces multi-sited ethnography as a less common form of ethnography that seeks rather to follow the cultural meanings, objects, and identities that are circulated in diffuse time-space. This type of ethnography acknowledges macro-theoretical narratives of the world but does not rely on them to shape the local context, rather it moves along, between and within different sites of study to construct connections between sites and between sites and macro-perspectives. This approach assumes that cultural formation occurs at several sites and encourages strategies that follow connections, associations, and relationships resonating with STS approaches to tracing imaginaries (Jasanoff, 2007, p. 200). Following Marcus' (1995) approach to multi-sited ethnography, this study weaves together multiple physical sites of study and actors to explore their relationships and the way distinct discourses are transferred between places and interact with each other. Indeed, the contours, sites, and relationships that form the *monte* were emergent rather than having been defined before I 'entered the field'. This is consistent with principles of the extended

case method, where links are followed that make up a relevant network (Mitchell, 1969). The actors I engaged with and the sites I moved through are therefore a result of my emergence in the Galician *monte*. The actors that I interviewed, observed, and spent time with are not a homogenous group, their visions of the *monte* vary and cannot be agglomerated into a narrative of structural, universal regularity. Rather, narratives worm their ways through the sites I study – sometimes remaining parallel and opposite and other times coming together with situated phenomena – manifesting in juxtapositions, differences, and similarities between different actors in the Galician *monte*. Resonating with Jasanoff's (2007) conceptualization of comparative work, the actors I engage with define themselves in different manners in relation to an imagined *monte*, and these self-descriptions are indeed considered in relation to said imaginaries at work, to be deconstructed rather than existing on their own as a-priori categories.

My multi-sited ethnographic work resembles what Marcus (1995) calls 'following the plot', where I move through and between sites. This form of study explores a narrative which can then be contrasted to a different narrative constructed through ethnographic investigation, which brings about interesting conclusions. He cites, for example, Boyarin's (1992) work on the politics of memory to emphasize the way narratives, plots, and allegories are created through remembering and forgetting and can be reconfigured to serve state and institutional orders (p. 109). Boyarin's (1992) book considers Jewish memory and the way such memory is constructed, contested, and politicized across various sites like Paris, Jerusalem, and New York. During my fieldwork, tracing imaginaries of the Galician *monte*, the spatial span of my sites may have been much smaller than the Boyarin's work, yet similarly approaches the study of meaning and identity through its expression across various sites. During my fieldwork, I following the plots of various research participants, drawing parallels between such personal plots, institutional discourse, literature, and grey literature. In line with co-productionist thinking, the groups I had previously assumed (and who describe themselves) as being opposed to each other could not be fruitfully conceptualized into static positions around the issue of what the *monte* should be, but rather allowed me to consider how what they considered 'facts' about the *monte* informed their actions and indeed their normative judgments of what the *monte* ought to be.

The potential of (multi-sited) ethnography to illuminate imaginaries has not traditionally been foregrounded in academic scholarship. As Hunt (2011) writes, "ethnography is rarely projective; it does not speculate on what might happen next" (p. 35). Instead it has traditionally been used more to study present, in an immersive, and in the context of multi-sited ethnography, geographically disperse ways. Its primary applications have included exploring kinship, rituals, social dynamics, and everyday interactions in fields such as anthropology, sociology, education, healthcare, business, and community development. In this sense, observation and interpretation of lived experiences, social relations, and cultural meanings of daily life have been the locus of focus, to gain an understanding of shared cultural phenomena (Englund & Leach, 2000). Imaginaries, as shared visions of desirable futures, can be accessed through reflectively engaging with personal lived experiences and shared stories that relate to visions situated within institutional realms that can be investigated through policy papers and public communications. Following Jasanoff (2015), my engagement with imaginaries of the *monte* not only considers institutional realms but also takes seriously local actors whose stories and visions are accessed through personal engagement. Local actors' vanguard visions become accessible through ethnographic methods that entail participation and reflexivity, as a key to ethnography (Walsh, 1998).

3.4 Selection of field sites

The way I approached researching the interactions between imaginaries of the Galician *monte* and the way these materialize in practices is loosely based on the idea of 'following the plot'. Rather than attempting to justify the selection of my field sites based on criteria that resonate with principles of 'generalizability', 'validity', and 'representativeness' – which are fundamentally positivist requirements (Khan, 2014) – I will outline how I moved from one site to the other and how I decided what actors to include and why they matter to the imaginaries I seek to explore. In this sense, data is not something that already exists 'out there' to be found and synthesized according to predetermined, seemingly objective criteria (Alvesson & Sköldberg, 2017) that allow for the idea of generalizability to, but rather I play a performative role in the research process to be reflected upon. As a central component of multi-sited ethnography, the study's "contours, sites, and relationships are not known beforehand, but are themselves a contribution of making an account that has different, complexly connected real-world sites of investigation" (Marcus, 1995, p. 102). In this section I will outline the fieldsites, explain how they are important for the exploration of imaginaries, and how I gained access to them.

3.4.1 Field site I: Mourente

The first site I engaged with was the *Monte vecinal en Man comun de Mourente*. This commons *monte* is located on the outskirts of Pontevedra, about six kilometers from the city center. The commons community consists of 144 members who collectively decide over 77 hectares of land. As a legal commons, Mourente has existed for thirty years. In those thirty years the governance of the *monte* has remained with the same president and a similar board of directors (x*unta directiva*).

I chose Mourente as a fitting case for studying imaginaries of the *monte* for various reasons. Firstly, as a peri-urban commons, Mourente provides an apt opportunity to study the interactions between an institutional imaginary of forestry for sustainable development, elaborated upon in Chapter 4, which puts specific emphasis on the importance of peri-urban forests for societal wellbeing, and the visions of forestry held within such communities. The binary constructed between 'urban' and 'rural' within forestry imaginaries could be explored in this way, to shed light on how uses of the forest in a peri-urban setting are imagined both by commoners and by institutional discourse. Furthermore, peri-urban forests are both a relatively recent phenomenon within forestry studies and are deemed critical sites for sustainable forestry management in recent policy discourse, converging rural and urban uses of the forest. Finally, the commons in Mourente prides itself for opposing state-supported forestry practices that are promoted in policy realms by enacting different forestry practices, making it an interesting site to consider how communities oppose and negotiate state forestry logics. The president of the commons of Mourente effectively acted as a gatekeeper (Walsh, 1998) allowing me to gain access to the peri-urban commons of Mourente, attend meetings, and arrange interviews with board members and commoners. Additionally, the president facilitated access to networks of commons *montes* like Iniciativa Comunales (active in all of Spain), ORGACCM (Organización Galega de Comunidades de Montes), Man-comunidade de Pontevedra (which groups together 14 commons communities in the province of Pontevedra).

3.4.2 Field site II: Froxán

My second field site is Froxán, a village located in Lausame in the province of A Coruña, about sixty kilometers north from Pontevedra, where six houses are inhabited. The Comunidade de Montes Vecinal

en Man Comun (commons community) of Froxán is made up of six people, in line with legal guidelines of one commoner per household. Initial contact was established over e-mail, after which I visited the village and was invited to come stay with one of the families for one week.

The Froxán commons spans 100 hectares, composed of mainly eucalyptus and pine monocultures, in addition to two windmills installed in the early 2000s without the community's permission, and an illegal mining operation. In 2006 and in 2016 two massive fires destroyed part of Froxán's common lands in addition to coming very close to destroying the village, changing the course of Froxán's commoning practices in their *monte*. Since 2016, the community has been eradicating eucalyptus and pine to allow the *monte* to regenerate towards what they imagine its state should be.

I chose to include Froxán because it is what Stake (1995) calls an illustrative case. The village is an illustrative case of innovative ways to enact a different imaginary of the *monte* and concomitant practices that I did not find at other potential sites, where Froxán has developed ways to be active in the *monte* in a different form than the institutional assemblages that shape many Galician common lands. Rather than only companies and engineers managing the *monte* and doing the physical labor, in Froxán a volunteering program was born which now travels across Galicia to work in different *montes* eradicating invasive species and working towards a different imaginary of the *monte*. This initiative is called the *Brigadas Deseucaliptizadoras*. Illustrative of actively working towards a particular imaginary of the *monte* I chose the case of Froxán to learn about how such activity is mobilized, how divergence exists within a community regarding imaginaries of the *monte*, and the historical contingency through which imaginaries are mobilized. The generational change that is currently happening in Froxán implies an associated change in how the *monte* is managed and this is one of the reasons, as my key informant of this case study explained, that such novel practices are arising.

During my one-week stay in Froxán, I conducted 6 semi-structured interviews that were recorded, in addition to two interviews that were not recorded and one interview that was partly recorded. I also took photos and kept a diary during my stay in the village. In addition to this stay I visited Froxán on eight further occasions.

3.4.3 Field site III: Lentille

My research with the *Brigadas* brought me to different physical sites in Galicia and in line with case-study selection as an emergent process (Ragin, 2009), I chose to include Lentille to deepen my engagement with the theme of managing the *monte* against invasive species, arising through my participation in the *Brigadas* and forming the bulk of Chapter 6. This village, inhabited year-round by four households with additional seasonal occupancy, exemplifies an ongoing struggle for communal land rights amidst challenges posed by the loss of historical documents standing in the way of Lentille's common lands being recognized as pertaining to the community. The battle for recognition produces friction with the battle against *acacia* which is an invasive tree species that has come to surround the village entirely. In 2004, a fire which was set from three distinct locations came to surround the village and destroyed all vegetation in its path. The fields which had previously held vines, grassland, and trees like chestnut or oak, were decimated and *acacia dealbata*, as a pyrophyte species, took advantage to replace previous vegetation. Similar to Froxán, the fire and the danger it imposes for people living in the village, has created a sense of urgency to combat this species and come together to work towards a different imaginary of the *monte*.

I stayed in Lentille for one week, living with a family consisting of three generations. I carried out five recorded interviews and various unrecorded interviews. Additionally, I kept a diary and took photos. Subsequently, I visited Lentille on seven further occasions.

3.4.4 The *Brigadas Deseucaliptizadoras*

One group of actors I chose to include into my fieldwork on exploring different imaginaries in the Galician *monte* were the *Brigadas Deseucaliptizadoras*. This initiative, originating in Froxán, is an innovative way of working in the *monte* as it transposes a traditional practice of working together in the *monte* onto the socioeconomic conditions of today to become a popular initiative now working throughout all Galicia to eradicate invasive species. I included these actors in my research because they meaningfully contest and negotiate the institutional imaginary of the *monte* as exemplified by the innovative practices the initiative engages in. Including the *Brigadas Deseucaliptizadoras* in this study offered me an opportunity to experience how practices are informed by and contribute to the formation of a sociotechnical imaginary, in a more embodied way than my engagement with formal commons communities allowed. The inclusion of this group of actors resonates STS claims about how sociotechnical imaginaries manifest for different actors and allowed me to explore diverting actions and performances related to how the *monte* is imagined.

After the villagers of Froxán suffered a serious forest fire in 2016, they decided to start a volunteering program to convert their commons into a different *monte*, not one filled with pine and eucalyptus monocultures. They started a crowdfunding, reached 10,000 euros in two weeks and with hundreds of volunteers worked to reforest the *monte* with autochthonous tree species. The initiative continues today with 1,500 registered volunteers and about 15-30 people joining each action.

3.4.5 Comunidades de Montes Vecinal en Man Comun (commons communities)

The sites included in the research were emergent, yet they were also dialectally tested to the puzzle I seek to put together regarding the negotiations of imaginaries in the *monte*. I therefore also included other commons communities in exploring these visions through considering webs of meanings in interaction (between different stakeholders). I visited various *montes* where I conducted formal and informal interviews. These sites complimented the research I did in Froxán, Mourente, and Lentille by broadening the landscape in which my inquiry into commoners' imaginaries of the *monte* situated itself. Some of the commons I visited were Rebordelo, A Lama, Salcedo, Teis, and Tameiga. These visits consisted of physically visiting the *monte* and speaking to commoners and presidents of these communities.

3.4.6 Other actors

My involvement with other forestry actors was motivated by the understanding of imaginaries as institutionally stabilized and translated between various different sites of meaning-making. The importance of forestry engineers and scientists became evident through my research process and work in Mourente and I chose to interview the forestry engineer that works with the community of Mourente in addition to many other *montes*. In addition to this engineer, I also interviewed a prominent forestry company working with communities around Pontevedra. Other institutional actors that I interviewed include a leading law firm concerned with issues around common lands in Spain, forestry associations, other forestry companies, and forestry scientists. Within this group of actors, I conducted 8 formal semi-structured interviews which were recorded and transcribed.

3.5 Data collection methods

"And methods themselves? These become cultural, practical, materially-based, theoretically implicated, institutionally located, and socially shaped routines or procedures." (Law, 2015, p. 3)

As part of my multi-sited ethnography, I relied mostly on semi-structured interviews and participant observation. The interviews took place between December 2022 and October 2023, with stays in Lentille and Froxán during this time, in addition to interviews with commoners in Mourente and visits to other commons communities as field sites. After October 2023, interviews and fieldnotes were organized on the computer, and transcribed. Additional interviews were held sporadically when new important, additional information through new access emerged to complement existing data, like the meeting with a NGO with personal ties to an important forestry scientist who I was then able to interview due to this personal connection in March 2025. Subsequently, I attended more sessions with the *Brigadas Deseucaliptizadoras* and conferences about the *monte* from which information was also used in my thesis. In this section I explain the methods used in my multi-sited ethnography.

3.5.1 Document analysis

The qualitative methods relying on participation to constitute primary data were complemented by a document analysis based on secondary data (Bowen, 2009) scrutinizing laws, policies, historical documents, archival records, scientific literature, and relevant forestry journals (particularly the *Revista de Montes* which goes back to 1877) in a historical manner. Document analysis consists of "finding, selecting, appraising (making sense of), and synthesising data contained in documents" (Bowen, 2009) and the use of various sources (e.g. advertisements, news, personal blogs, and policy documents) is considered a means of triangulation to ensure validity and reliability of research findings (Denzin & Lincoln, 2011). While such quality criteria will be discussed later on, the use of document analysis is common in research situated in the interpretivist/constructivist paradigm and provides a reliable source of investigating how particular actors think about an issue – without the potential danger of 'steering' by the researcher as is said to happen in interviews (Ikram & Kenayathulla, 2022; Ryan, 2018).

3.5.2 Participant observation

In order to explore how imaginaries of the *monte* are formed and how they materialize into practice, I relied on participatory observation. By engaging in participant observation as a research instrument I was able to participate alongside the people forming part of my thesis to experience together how practices are carried out. As part of my ethnography, participatory observation meant I used my own experience as a research instrument which I could relate to what participants of my study shared in interviews. Reflexivity about this experience meant I had to check my own emotional state, predispositions, opinions, reasoning behind particular observations, and generally things that happened to me while observing, taking notes, and later interpreting these notes so that these could be understood reflexively (Emerson et al., 2011). Particular reflections on this process will be shared in section 3.6.

In my research with the *Brigadas Deseucaliptizadoras* I partook in acts of destruction in the *monte* by taking on an active role within the context I study (Chevalier & Buckles, 2019). My participant observation with the *Brigadas* aimed at understanding how imaginaries of the *monte* relate to practices of destruction and vice versa, and even though 'people can talk about their practices' (Hitchings, 2011) I found that talking about destroying trees could lead to awkward accounts of that which had passed.

Talking about the practices that I both observed and participated in led to *Brigadistas* verbally reflecting on the practices that formed the routine of a *Roga* or work session, and enabled imagined aspects of these practices to materialize into speech. Yet there were multiple occasions upon which my interviewees became awkward, and uncomfortable due to the perceived 'dumbness' of my questions when asking about mundane practices. In these instances, it was very valuable to be able to return to experiences shared through my participation in the work sessions. The awkwardness was in itself valuable, resonating Hitchings' (2011) reflections on the work of Giddens (1986) about the moments where routine actions are brought into consciousness as being valuable through talking about them. By participating in the acts of destruction together with *brigadistas* I could refer back to shared experiences in my attempt to bring practices into conscience in order to learn about how they relate to certain imaginaries of the *monte*.

Relevant to Chapter 6 of this thesis, my research with the *Brigadas* spanned two years of participatory observation where I took part in 14 actions totaling 18 days. During these days, I spent the one to two hour car ride to the *roga* with different *Brigadistas* who would come to pick me up in Pontevedra, I worked in the *monte* with different people, participated in the lunch and the afternoon festivities. These encounters were rich in material gathered, yet were not recorded with a recording device. Instead, I kept a field diary and typed up my notes after each action in line with some ethnographic approaches that emphasize the researcher actively participating in the context they study, and then writing up what has happened (Emerson et al., 2011). Characteristic to ethnographic fieldwork, and specifically to multi-sited ethnography, the following of people in different situations was a strategy I undertook. I participated in the *Brigadas* where I talked with *Brigadistas* while cutting down trees, but also visited various participants outside of these spaces like in their homes or in public spaces. As is characteristic to multi-sited ethnography, these sites and relevant actors were not explicitly known before encountering them, and I followed meaning-making around the *monte* through the relationships, translations, and associations between sites and actors (Marcus, 1995). An example of this was the interacting with inhabitants of Froxán and Lentille who were not participants of the *Brigadas* to understand how the initiative is perceived by those not involved with it and how the vanguard vision of *destruction as care* was negotiated by these actors. I stayed in these two villages for one week at a time, where my participant observation activities consisted of immersion in local actors' lives. This immersion meant I stayed at a family's home in Lentille and in Froxán, where I shared meals, conversations, helped out with home tasks, accompanied parents on their daily undertakings like bringing their children home from school or going to the city for appointments.

Relevant to Chapter 5 on *Commons Communities* was my ethnographic research with the commons community of Mourente which was complemented by the go-along technique used with other commons communities like Rebordelo, Salcedo, and Teis (Kusenbach, 2003). In Mourente, my participation in the commons *monte* consisted of three yearly commoners assemblies (2023, 2024, and 2025) and several board meetings, in addition to living in a neighborhood that falls under the parish of Mourente and thus engaging with commoners on a day-to-day basis, going to the *monte* for herbs along with commoners and also on my own. I also attended the annual commoners' feast and 30th anniversary of the community's legal existence in April 2023 which consisted of a lunch and concert on the football field of the parish, next to the social center in Cons, Mourente. My ethnographic engagement with Mourente was different from that in Froxán and Lentille as it spans several years with the community yet less intensity with regard to my engagement with community members (I did not stay with anyone in the parish of Mourente).

When it came to documenting events, practices, and the way people interpreted these, I loosely followed Emerson et al's (2011) procedures on how to write ethnographic notes. In addition to paying attention to initial impressions, taking note of unexpected and significant events, and being attentive to the temporality of what I was studying – Emerson et al (2011) note that writing about particular events sets a precedent to writing about similar or related things – I particularly paid attention to what those in the setting I studied experienced as significant or important (p. 25). While my participating in the field was a reflexive exercise, I chose to stay true to my interlocutors' worlds and focused particularly on events and actors that were important to my interlocutors.

3.5.3 'Go-along' method

Participant observation requires deep emersion into the study context, something that was able to be done for the three field sites of Lentille, Froxán, and Mourente. Staying true to my 'following the plot' (Marcus, 1995) thinking and interest in how other commons communities (recommended and approached through contacts from the aforementioned case studies) was answered through visits to other nearby communities like Teis, Tameiga, Rebordelo, A Lama, and Salcedo. At these sites, formal interviews (discussed in the next section) were complemented with the 'go-along' method that is used to understand people's experiences of their local context (Carpiano, 2009; Kusenbach, 2003). As the name of this method illudes to, this method consists of going along with informants' activities and practices within their local, familiar context. It grapples directly with the need to consider the role of physical, social, and mental dimensions of place and its interactions with individuals (Carpiano, 2009). Go-along interviews are used within ethnographic research as a way to explore cultural phenomena while not requiring a prolonged engagement with the research context (Alexander et al., 2020) making it an appropriate tool for my engagement with commons communities where prolonged and in-depth engagement was not possible.

3.5.4 Interviews

In addition to conducting interviews to complement the participatory research methods I used during my stays in different villages and with the *Brigadas*, I also conducted interviews with other stakeholders who enact imaginaries of the *monte* in different ways. As laid out in the *Research Design* section, my inquiry into imaginaries of the Galician *monte* is based on both temporal analyses of policy documents, laws, and other grey literature – as is commonly drawn from in research employing the sociotechnical imaginaries framework, and also engages spatially with multiple communities and actors through a multi-sited ethnography and interviews. While interviews are less commonly used in research on sociotechnical imaginaries, scholars have employed this method to gain further depth and details about how imaginaries of the future are drawn upon by stakeholders – especially in combination with policy document analyses just like in this thesis (e.g. Rudek, 2022; Soares Seto, 2025; Webster, 2025).

The following table gives an overview of the interviews I carried out.

	Interviews
Mourente	12
Froxán	6
Lentille	5
Brigadistas	11
Other relevant actors	8
Other CMVMCs	8

In Mourente, I interviewed 12 commoners, 8 of whom were on the board of the commons community. These 8 people meet every month to discuss operational matters like what workers will come to the commons to carry out what works, what works have been done and whether they were satisfactory, the status of payments to and from the community, subsidies to be applied to or that are upcoming, issues brought forward by or to discuss with the forestry engineer, and other operational matters. I interviewed these more involved commoners and other commoners in similar manners, through semi-structured interviews. When interviewing someone with more knowledge about a certain subject, for example, the community's treasurer or supervisor of forestry works, I tailored my questions to their specialties. The treasurer, for example, showed me the previous year's balance sheet and I asked him about the details of the payments they were making and what they were receiving. My interest in the way the future of the *monte* is imagined by such a commoning community led to questions like 'how do you see the future of the *monte*?' or 'what institutional, social, cultural, political changes are needed to achieve a better future in the *monte*?' which were general questions asked to all interviewees, with further questioned tailored to the answers of interviewees. I interviewed 6 men and 6 women that were all between the age of 40 and 75. The way interviewees were selected was by attending a board meeting and getting everybody's contacts, after that these initial people brought me into touch with other commoners.

In Froxán, I interviewed 6 people, 3 of whom were on the board of the commons. The research questions were the same or similar to Mourente, with some more questions about the *Brigadas Deseucaliptizadoras* that worked in their village and how interviewees related to this initiative. The age of those interviewed was between 40 and 80 years old, two were male, and four were female. The way interviewees were approached was through physical presence in the village and through contacts in the village. As I stayed in Froxán for one week, I ran into people or visited people at home asking if they would be interested to participate in my research.

In Lentille, I conducted five interviews. Two of these interviews were with the adults of the family I was staying at, with more informal conversation throughout my one-week stay factoring into participatory observation notes. The people I interviewed in Lentille were in their 40s, except one who was 18 years old, and three were female and two interviewees were male.

I interviewed 11 *brigadistas*, most of whom were approached through participating in the actions of the *Brigadas Deseucaliptizadoras*. Interviews took place at my home, at homes of *brigadistas* (e.g. in Vigo), and in public places like cafes. Most of the *brigadistas* interviewed were between 30-45 years old and others were above the age of 45, five interviewees were male and six were female. Questions

asked to *brigadistas* concerned their relationship with the Galician *monte*, their motivation for being part of the *Brigadas Deseucaliptizadoras*, their hopes and fears for the future of the *monte*, and what changes they deemed necessary for achieving a desirable future for the *monte*.

Furthermore, I interviewed 8 other relevant actors, like forestry engineers, forestry companies like Asociacion Forestal Galego, Organización Galega de Comunidades de Montes Veciñais, Probosque, Verdegaia, and a representative from the Galician government working on rural affairs and forestry. These contacts were acquired in various ways. Firstly, contact was facilitated by various gatekeepers (Garrido et al., 2011) who were contacts acquired through the Post-Growth Innovation Lab's network and personal connections (like contacts from my case studies). Questions asked to these actors aimed at understanding the larger context of my inquiry; what is currently going on in forestry science, the industry, and organizations that my interviewees work with across Galicia? I asked these actors what their engagement with the *monte* consists of, how they see the future of the *monte* and what can be done for a better future, what current problems are and their causes, and questions specific to the line of work that my interlocutors were involved in. This allowed me to contextualize what my in-depth research with communities was uncovering, ask more relevant questions, and be generally more informed about other stakeholders relevant to the *monte*.

Finally, similarly to interviewing other relevant actors, I interviewed 8 other commons *montes*: A Lama, Salcedo, Teis, Tameiga, Rebordelo, Bora, Bueu, and Val Miñor. Interviews were done with community representatives, often the presidents of these commons communities. Interviews sometimes took the form of, or were complemented by, the go-along method where community representatives would guide me through the *monte* showing me what had been planted, what changes were made, what was yet to be done, and so on.

3.6 Positionality and Reflexivity

As Marcus (1995) writes, "multi-sited fieldwork is thus always conducted with a keen awareness of being within the landscape, and as the landscape changes across sites, the identity of the ethnographer requires renegotiation" (p. 112). As I moved between and within sites to study how the meaning of the *monte* is contested, constructed, connected, I engaged in acts of deconstruction, observation, conducted interviews, which were all critically examined and interpreted. In this section I will first reflect on the methods used in this study, to then reflexively consider the way I positioned myself and was positioned by others as a key part of ethnographic research.

3.6.1 Multi-lingual nature of my multi-sited ethnography

In addition to moving between physical sites, my multi-sited ethnography also took a multilingual form. Until two decades ago, multilingualism had generally been taken for granted in ethnographic research, but the turn to reflexive research practice has meant that the use of linguistic and cultural diversity has come under scrutiny (Gardner & Martin-Jones, 2012). The need to reflect on the use of multiple languages brings some discomfort to ethnographic research in recognizing one's active role in translating and creating knowledge but also one's performative role in the research contexts one engages in through language. My research process in the Galician *monte* resonates with Blackburn's (2019) considerations of the emergence of a field-identity, not through the pressure to pass as a native, but instead the appreciation of my attempt to approach (and never attain) nativeness.

After having spent time in Galician villages, the role of language in the process of creating and maintaining subjectivities and shaping imaginaries of the *monte* has become an important characteristic of my fieldwork. As much as I became enlanguaged (Phipps, 2010) or absorbed into the social world I was researching due to the learning of the local language, the Galician language also played a significant role for my interlocutors. Some *brigadistas*, for example, would associate the lack of speaking Galician with the empowering of the Spanish State at the expensive of Galician tradition and traditional uses of the *monte*.

Galician is a language whose use in society has been marginalized throughout history, especially since the founding of the Spanish state in 1492 (Clark, 2010). In Galicia the ruling classes are said to have looked to Madrid for cultural prescripts, positioning Galician as a rural, backwards language which indeed was largely spoken by rural people as Galicia was, and continues to be, a predominantly rural region. In the 1870s the *Rexurdimento* or resurgence movement sought to revive the Galician language, and its influence is still apparent in today's Galician literary movement. The Franco dictatorship, which lasted from 1939 to 1975 prohibited the speaking of Galician in the pursuit of a vision of a united, uniform, independent nation where regional diversity was violently put to an end. It is in this context of fighting to sustain a language which has been neglected, framed as backward, prohibited, and today continues to disappear that my engagement with rural communities and with activists unfolded. It would be ignorant to shape Galician as a linguistic 'resource' I made use of to facilitate my rapport with the people I studied and worked with (Denzin & Lincoln, 2011), as through the process of this thesis I have come to understand and embody language beyond its contours as a resource. My interest in and attempts to understand and take part in Galician culture and language allowed me to immerse myself in contexts and be treated as an in-group person, against those who do not attempt to speak Galician.

The process of my learning and using Galician during my ethnographic work is what Phipps (2010) refers to as becoming 'enlanguaged' by the social world of that language meaning one becomes altered in the process of learning a language as it is embedded in social processes which one adopts (often without being reflective). Looking back at my ethnographic work I see various moments in which the learning and use of Galician was deeply embedded in the appreciation of the Galician social world and actively contributed to its construction.

Becoming absorbed into this context, through both the active participation in working in the *monte* with activists while in parallel learning Galician was not a negative aspect of my research nor is the 'loss of critical distance' something to linger upon as a final fatal flaw, rather the way my own being in the world changed through the research process is something that raises much more interesting points than when acting unaffected. In the next section I will reflect on my positionality within my ethnographic study, heavily influenced by the learning and use of Galician as a language, like all languages, charged with a social world.

3.6.2 Situated knowledge and reflexive research practice

I tell stories that are tied to places, they are tied to my engagement in and with those places, and ultimately, they are tied to me. More than three decades ago, feminist scholars rejected positivism to favor methodologies considering situational knowledge arising from participants' experiences and social location (Reich, 2021). Situated knowledge, introduced by Haraway (1988) is a critique of the way positivist knowledge pretends to see 'everything' from 'nowhere' and can rely on this assumed generalizability to erase the mere possibility of other perspectives. Approaching knowledge as situated

requires reflection on the 'somewhere' from where I speak, from where I am designing my research, carrying out field work, analysis, and reaching conclusions in conversation with theories. Reflecting on this somewhere requires reflecting on the research process by looking inward and outward, namely inwards through reflexive methods of autoethnography and outwards in terms of relating to those involved in my research (Caretta, 2015).

Various perspectives within feminist thought broaden the consideration of one's positionality, like Crenshaw's popular intersectionality approach (Crenshaw, 2013). Her work showed how meanings ascribed to categories are not universal in determining a person's experience in society. An upper-class white woman preaching for equal rights for women does not experience the same injustices as a black, lower-class woman – nor will they experience the same 'achievement' of equal rights for their shared category of women.

The meanings ascribed to self-evaluations are not stable, they – just like all knowledges – must be seen in relation. In the case of reflecting on my positionality, or the point through which I view the world, this point is unable to be pinned down – it can only be followed in movement, reflected upon, interrogated, and accounted to in a reflexive process that, too, is never complete. As noted by sociologist of science Harry Collins (1986), ethnographic research requires researchers to engage in observation, participation, interviews, reading documents, and so on and also to use themselves as research instrument as they develop competence together with their research participants – which they then use as source for their writing (quoted in Potter & Shaw (2018)). My immersion into the lives and the places I encountered through my fieldwork was a primary source for my research, particularly Chapter 6 on destruction as care and also the imagined division between the rural and the urban in Chapter 5, which were explored through interviews with relevant actors but also heavily informed through my own experience and reflexive thinking.

3.6.3 Reflections on positionality

That which I identify as my-'self' does not exist as an essential, delimited entity but is shaped through relations, and the way I engage with this process of relations is a valuable source of knowledge creation. Boyarin (1992) writes, "like almost everyone else, I always act as though I were in fact a subject – a stable human unit defined in space and time" (p. xi), yet even though we may act this way, the way we are positioned within relations changes and thus our subjectivity also changes. In this sense, an important part of reflexive research practice is reflecting on positionality. Positionality refers to "where one stands in relation to 'the other'" (Merriam et al., 2001, p. 411 quoted in Bourke, 2014) and contains supposedly fixed and mendable qualities (Holmes, 2020). The mendable qualities are those the researcher reflexively engages with through self-scrutiny of how preconceptions, previous experiences, pre-study beliefs, motivations, and theoretical foundations have affected the research process. They relate to the way I engage with the different actors partaking in my research and how I reflect on these relations. The fixed qualities are said to hinge on characteristics like sex, gender, political preferences, educational background, and they seem to reflect this 'self' that I would perhaps return to when leaving the 'field'. Holmes (2020) writes that "some aspects of positionality are culturally ascribed or generally regarded as being fixed, for example, gender, race, skin-color, nationality" (p. 2) and I experienced through my research how aspects of my positionality depended on the relations I engaged in.

The traits that shape my perceived social location (Reich, 2021) make me a white, cis-gendered, heterosexual, able-bodied woman from a middle-class family from Northern-Europe with an extremely

privileged formal educational background. People I engaged with in my fieldwork indeed responded differently to these traits, which is an important component to consider through autoethnographic methods (Ellis et al., 2011) and also a reminder of the entangled web of meanings through which my identities are brought into being (Anderson, 2000). In the following sections I will reflect on three different ways that my relationality to research participants was imagined, and how this affected my research.

1. Negotiating insider/outsider status

The fact that I live in Galicia but come from the Netherlands is a self-descriptor that shaped all the interactions within the research process, where I could often position myself as a non-knower, new-to-the-scene but also would often be positioned in this way without my intention. Most interactions reminded me of my 'outsider within' status (Collins, 1986) and on various occasions I could draw on my experienced reality to both substantiate my research results and position myself within spaces. Insider-outsider positioning is said to hinge on the cultural proximity between researcher and the researched (Hodkinson, 2005) where those considered insiders connect more easily with research participants (Bengry, 2018). My insider status with the *Brigadas Deseucaliptizadoras* hinged on a shared purpose and ethical commitments, it was thus relatively easy for me to work with these activists and to be accepted as a member. My repeated presence in actions also strengthened the ties formed in the field, where I was not considered to be a researcher who stays a while to collect data and then leaves (field notes *Brigadas*, 2023). Research with commons communities was different, here I was considered an outsider which in interviews elicited more free speech by my interlocutors (Caretta, 2015) as they considered I was not part of the community.

2. *Negotiating gender and language*

My inability to speak perfect Galician and Spanish allowed me to ask questions that could otherwise be considered 'dumb' as I asked interviewees to explain and elaborate on words and concepts. This way of positioning myself as a non-knower and not perfectly mastering the language of my interviewees also drove to several encounters with mainly male interviewees lecturing me on subjects I do have knowledge about – like my country of origin – and treating me as inferior. The intersection between gender and language resulted in situations of 'mansplaining' where the naiveness perceived as inherent to being a female researcher (Flanigan, 2023) and my inability to speak perfect Spanish/Galician led to male participants explaining unnecessary phenomena at large, rather than answering my actual questions. This allowed me to gain interesting knowledge about the authoritativeness of particular visions of and knowledges about the *monte*, like, for example, when a lawyer in Vigo answered my questions with little interest and an attitude bordering scorn to then hammer down on how I *should* be studying the economic value of the *monte* instead of what I was doing with my thesis. The superiority of orthodox economics and the superiority of the lawyer's knowledge were paired to supersede both my academic interests and my research capacities. The various instances where (male) interviewees explained to me, without my asking, what I *should* be study and *why* provided interesting insights into the role of knowledge and the way the *monte* is imagined – ultimately that which I was interested in studying.

The intersection between researcher outsider status based on linguistic capacity and gender created the opportunity for me to get more interesting data (Flanigan, 2023). Indeed, participants who treated me as a young, female, non-Galician researcher engaged in speech that was much more free and less

constrained than interviewees who constructed my positionality around my academic privilege, the fact that I speak many languages, and am pursuing a degree at a university. They would comment, embarrassedly, that I "surely know much more about the topic" and that they "are in no way experts on the matter" (interview with Fabio, 2023). Such encounters also perceived my limited ability to speak Spanish/Galician in a different manner, namely as a sign of interest and respect that warranted the same from my interviewees and even wonder and active appreciation; 'how great you speak Gallego!' (field notes, *Brigadas*, 2023).

3. Negotiating formality and perceived position of power

The shift from formal to informal research settings also shaped the way my positionality was perceived. As the encounter with the lawyer from Vigo, for example, brought forth. When I was interviewing him formally, with a device recording his speech, his manner was constrained and controlled. He shared a script-like narrative about the history of the *monte* and the way laws had evolved over time. It was when the recording device had been turned off, and I was amicably wrapping up, that his questioning and lecturing about what I *should* be doing started. The experience attended me to the affective capacity of my recording device in shaping knowledge. Rather than acting as a means to access an objective reality 'out there', which for example Douglas (1985) quoted in Nordstrom (2015) hints at when saying "[but the recording device] is such a powerful weapon in the fight for truth that it must be used in all situations where it is allowed" (p. 83) the recording device plays an active role in shaping meanings, knowledges, and realities. Nordstrom (2015) criticizes the standardized used of recording devices during interviews arguing that they "'capture data' that are 'apolitical, acultural and aproblematic'" (p. 390). This reflects another experience I had during my fieldwork where a woman, in her seventies, communicated through nonverbal communication her discomfort at the recording device. She fidgeted, repeatedly said everything was fine and she was happy with the way things were in the *monte*. I decided to turn off the recording device and the interview entered the realm of informality, allowing the perceived power dynamics to fade away. A similar thing happened in another interview, with another woman, who repeatedly said everything in the *monte* was "fine" and there were no problems, even if I did not ask about that specifically. The recording device signaled authority to my interviewees and played an active role in the creation of knowledge as the artefact allowed nonverbal knowledge to be communicated (e.g. fear of saying something was wrong) and thus factor into my research in a way that solely focusing on words would obscure, but was also a prop to be discarded so that my interviewees could feel comfortable speaking with me.

3.7 Data Analysis

3.7.1 Following the mystery

My departure into studying the Galician *monte* resembles what Alvesson & Sköldberg (2017) call 'mystery creation' (Alvesson & Sköldberg, 2017, p. 387; *see also* Alvesson & Kärreman, 2011). Such an approach to research starts with an anomaly, based on the work of Kuhn, namely something empirical that does not exactly fit with expectations from explanatory theory. My initial interest in management of the *monte* had been driven by the idea that commons are increasingly disappearing in modern capitalist society and the commons movement is rather a counter-movement, something that happens as a reaction in the Polanyian sense (Polanyi, 1944). Yet my engagement with the commons in Galicia seemed to contradict the enclosure of the commons hypothesis to provide an empirical case of continued existence of an allegedly 'tragic' property regime (Hardin, 1968). I therefore followed the

mystery of why and how the historical commons in Galicia have been able to persist and found a body of literature rife with economic problematizations of the *monte*, historical accounts, and sociological case-studies. This, in the spirit of abductive approach to research, was contrasted with my field notes and interviews to engage in the never-ending process of sense-making (Brinkmann, 2014).

The way imaginaries shape the way the *monte* is constructed in various sites became a telling dimension of my endeavour, and in line with the idea of mystery creation, it led me to think about how imaginaries arise and materialize, where, for whom, and what their implications are. The mystery was created, yet – contrarily to what Alvesson & Sköldberg (2017) propose – I do not deceive myself as to 'solving' it, rather the process is a never-ending process of sense-making (Brinkmann, 2014). Initially, I circled around the question of how Galician commons are recognized as legal commons and thus how the movement of enclosure has in this sense not 'succeeded.' But, shifting my attention to the realms of ecosystem services and industrial production of forest products I considered how we might differently understand enclosure, and the ways that the various meanings given "commons" shape the social and material order of the *monte* as much as its legal designation and the property regime of which it is part. This process brought me to the consider how imagined forms of nature (and particularly neoliberal nature) inform how actors think the *monte* should be organized, shaping my engagement with the various sites that constitute this study. Over time and as my engagement with different field sites and movements developed, in conversation with literatures, the exploration of the depth and diversity of this topic in itself became an end. This in turn shaped how I moved between sites and the people I interviewed, which I selected as part of a methodological commitment to delving into (rather than solving) the mystery that is environmental governance in the *monte*.

After completing my interviews in October 2023, I transcribed 33 of 44 recorded interviews. Due to the encounter of additional, important actors whose knowledge complement my existing data I carried out four additional interviews with three additional actors (NGOs, forestry scientist, and activist) in February and March 2025. The interviews were transcribed using automatic transcription service from NVivo which, in most cases, was inadequate when it came to accurately transcribing what was said in the interviews, so I manually followed up and re-wrote the scripts. The transcription of narratives was done authentically, staying true to actual speech rather than improving the grammar and syntax (Thompson, 2022). The interviews for the field sites of Lentille, Froxán, and Mourente were fully transcribed, the interviews with other stakeholders were partly transcribed where I used my notes to get to relevant parts of the interviews to transcribe those parts only.

3.7.2 Abduction as weaving theory and practice

The interwovenness of theory and empirical data in my research makes it hard, if not impossible, to divide neatly the transcripts into data and then into codes, levels, meta-levels (Thompson, 2022) to be contrasted – for example through visual networked diagrams like Attride-Stirling (2001). Instead, theory, method, empirical practice, and social institutions are inextricably intertwined (Law, 2016) and I iteratively moved between them to follow imaginaries in the *monte*. Theory is no abstract, overarching phenomenon to which data relates itself, instead it interacts with the way data is gathered and interpreted and in fact what data even is. Following Brinkmann (2014), I consider data to be something created rather than something that is given, to then be coded and used. According to Feyerabend (1970) the full understanding of something does not occur through a process that can be separated into neat parts, instead knowledge production, he proposes, is guided by passion, triggering behavior

and intervention which through reflection can be analyzed to create knowledge. Moments of curiosity therefore serve as opportunities to combine different sources of knowledge to come to insights.

Such a combination of different knowledges, of theory and research experience, is referred to as abductive reasoning as a "reciprocal coming-in-close and backing-off-to-a-distance in terms of researcher exploration of situations and evidence" (Earl Rinehart, 2021, p. 305). Abductive reasoning differs from inductive and deductive approaches as neither being data-driven nor derived from theory. Through abductive reasoning, the relationship between what Brinkmann (2014) refers to as *inquiry* and *situation* is explored through the blending of life, theory, research, and methods. Rather than the research inquiry being driven by data or by theory, attentiveness to breakdowns in understanding or explaining instances is warranted (Alvesson & Kärreman, 2011). This means that moments of surprise, bewilderment, or wonder shape how the research process unfolds. The idea of data then makes way for the notion of 'instances' (Denzin, 2001), which are explored through discourses, relationships, theories of self and subjectivity to understand how they are made possible (Brinkman, 2014; see also Parker, 2006). In this sense, the data analyst makes way for the bricoleur.

3.7.3 Coding and generating themes

Materials gathered therefore span a range of things like interview transcripts, photos, diary entries, WhatsApp messages, videos, intimate unrecorded conversations, and so on. 'Everything is data' (Latour, 2007, p. 133), yet in order for this large amount of material to become graspable I did engage in descriptive coding. A limitation to my engagement with the material also arises here; why did I not code my diary entries or fieldnotes or indeed the theories I use (Brinkmann, 2014)? To my transcripts I ascribed general descriptive codes, like 'social purpose of *monte*' or 'professionalization of the *monte*' or 'rural abandonment' in conversation with grey literature and theory. Abductive analysis in this sense is considered a creative process mediating "empirical observations of a social world" and "a set of theoretical propositions" (p. 2) (Tavory & Timmermans, 2014). This mobility also meant that I went back to quotes from the transcripts, adding different codes to the same quote or changing existing ones based on how my thinking evolved. In this sense, the process was a never-ending one, not adhering to the stepwise prescripts of coding protocols, but instead considering writing and analysis a simultaneous process (Latour, 2007). In addition to moving back to the transcripts, some quotes were also coded multiple times, like the following quote from the Mourente case study:

> "Those are long cycles of 50 to 80 years, and when they're harvested, a part can be used—but until then, what do you live on? I mean, the €20,000 needed for administrative work to maintain the community – where does that come from? That's why even the communities that are changing species are either doing it very slowly, or they have extraordinary income – like from a quarry that gives them €20,000 a year, or from renting out land." – Manuel, commoner from Mourente

This quote was coded as "need for short-term money", "cycles of trees", "bureaucratic burdens" and "sources of income". In turn the first and third codes were considered within the theme of 'making the *monte* operate like a private business' – which is a theme that came up in various interviews with different reasonings and explanations. This theme then directly also related to the species of trees and their "cycles" which in turn was an indication of how this interlocutor thought about trees; as providing money. Such themes were therefore also tied to each other, and compared with other interlocutors and other case studies.

In this sense, as Haraway (2016) writes 'it matters what stories we tell stories with', and the way trees are understood through their lifecycles and used as motivation to consider the way *monte* communities are increasingly made to function as businesses is given substance. The interview transcripts (and other materials that guided my thinking) were reviewed with sensitivity to what Haraway calls tropes, or metaphors that shape narratives (Haraway, 2016; Law, 2016). Tropes are important as they provide ways to access imaginaries around the *monte*; they compare the current situation to an imagined else, elsewhere. They contain claims to normativity, weave together culture and language, carry political agendas. For example, a *brigadista* describes the acacias around Lentille as the enchanted forest that grows around sleeping beauty's castle as she sleeps – shaping an imagined elsewhere (somewhere else) that could become a somewhere (here). This undesirable future is connected to an act; namely that of being asleep. Such a trope changes how storytelling is done, it makes one attentive to knowledge practices beyond scientific storytelling. But scientific storytelling also draws on and puts forth tropes, like the becoming of a grand nation through forestry advocated by forestry engineers. Other tropes include trees as pedophiles, as monsters, as Greek methodological figures, or even trees as production cycles as Mourente's commoner Manuel explained.

3.7.4 Organizing the historical analysis

The historical document analysis was conducted in a semi-systematic manner (Zunder, 2021) surveying sources of literature – like forestry journals, laws, and policy documents – according to basic, all-encompassing criteria. The inquiry was centered around how forestry is imagined as serving societal good, with analytical focus on themes of national identity, societal wellbeing, economic needs, technological and scientific discourse, and environmental criteria. The historical analysis was divided into three periods loosely following existing research on forestry history in Spain and Galicia (e.g del Corral, 2017; Pemán García et al., 2017; Rico Boquete, 2001, 2018; Vadell et al., 2016) that hint to different orientations of Spanish forestry over time. By reading this material and the laws and forestry documents they are based on through the lens of sociotechnical imaginaries, and the criteria previously mentioned, I constructed three periods where forestry served different imaginaries of desirable futures. These three periods (1850-1940, 1941-1970s, and 1970s until now) were constructed based on large, important political shifts – particularly the rise and fall of dictator Francisco Franco – that are also used in aforementioned studies on forestry history in Spain and Galicia. Subsequently the data within these three periods was organized thematically and chronologically.

3.8 Ethical considerations

This thesis is part of the PROSPERA project, acronym for "Prospering without growth: Science, Technology and Innovation in a post-growth era". PROSPERA is a research project funded by the European Research Council (ERC) under a Starting Grant awarded in 2020. The project is coordinated by Dr. Mario Pansera and hosted by the University of Vigo in Spain. With regard to ethics, this thesis follows the ethical guidelines that the University of Vigo requires for research projects in addition to ERC requirements.

Before each interview, informed consent was given by research participants either orally or in written form, where participants agreed that the data gathered would be used to produce academic outputs like scientific articles, book chapters, and this thesis. Furthermore, these forms stipulate the anonymity of the research, where respondents' names do not appear in interview transcripts nor in the thesis, nor anywhere else but in the audio recording. Audio recordings were stored on the University of Vigo's

Research Data Storage Facility (RDSF) according to the project's Data Management Plan and will be destroyed at the end of the project. Fieldnotes, photos, and other audiovisual material were stored on my computer in a secure file. Throughout my thesis I use fictional names of interviewees so that their identity is maintained anonymous.

3.9 Quality Criteria

Within the interpretivist framework, and following the discussion about methods relevant to the tracing of sociotechnical imaginaries across sites, criteria for research quality differ from those derived from positivist approaches like validity and reliability. Validity and reliability concern the accurateness with which 'reality' is being described (in the case of validity) and the stability and internal consistency of the study's results (in the case of reliability) (Kimberlin & Winterstein, 2008). Such criteria often lead to valuing quantitative research as this is considered as coming closest to reliability and validity (Cohen et al., 2017). Yet within the interpretivist framework, criteria for good research are different and less stipulated as this research paradigm considers reality to be multiple and subjective. In this sense, as the aforementioned setting out of methods has eluded to, my aim is more about following meanings across sites than determining some all-encompassing truth that will hold true in all occasions. Working with imaginaries requires recognizing the contextual nature of how imaginaries negotiate meaning and morality, and how this negotiation takes on various different shapes.

A concept that warrants elaboration is performativity, arising from John Austin's (1962) seminal work *How to Do Things with Words*. In this book, Austin challenged the assumption that language primarily serves descriptive functions, instead proposing that utterances possess illocutionary force; the capacity to enact realities rather than merely represent them. He distinguished between constatives (statements asserting truth claims about the world) and performatives (speech acts that produce effects through their enactment, such as vows or declarations). This framework was further developed by Jacques Derrida (1988), who emphasized the iterability of performatives. Derrida (1988) emphasized their dependence on repetition and citation within discursive systems. Derrida's intervention laid the groundwork for Judith Butler's (1993) theorization of identity as constituted through citational practices. They argue that gendered, racialized, and other social identities are not preexisting essences but effects of performative reiterations of norms across time and space. Butler's work further interrogates the tension between the materiality of the body and the performativity of social categories, positing that even ostensibly biological traits (e.g., sex) are materialized through ritualized, citational acts (Butler, 1993).

STS scholars also consider how social life is performative and how the effects of such performances order society (Law, 2016) with Watkins (2015), in the context of spatial imaginaries writing "viewing spatial imaginaries as performative suggests they not only representationally influence, 'prefigure', or legitimize material practices through language but are embodied by people directly in what they do. Performativity argues space is produced through performances, building material geographies from the embodiment of discourse" (p. 517). Considering that imaginaries, practices, and knowledge are performative naturally raises the need to reflect on methods, not as describing the world but as enacting the world (Law, 2016). As representing and enacting realities are simultaneous endeavors (Law, 2008), the methods used in this thesis need to be reflected upon to ensure quality, and to shy away from positivist inclinations that consider research as the way to 'best describe what there *is*'. In previous section, section 3.6.3 *Reflections on positionality*, such reflections were made, reflecting on

my own stance and positioning with regard to my subject matter and my interactions with various actors.

3.9.1 Noting the limits to methods used

Participant observation is a central method of ethnography and considers the researcher fully partaking in the context of one's study and observing while participating alongside research subjects (Aktinson & Hammersley, 1998). Participant observation was an important tool used while investigating imaginaries of the *monte* and its materialization in practice with communities of Froxán, Lentille, Mourente, and the *Brigadas Deseucaliptizadoras*. Yet on its own this method was not enough to lay bare the way my interlocutors drew on different imaginaries of the *monte*, as the physical practices lacked meaning that informed *why* certain actions were undertaken – and often during activities there was not enough space to deepen inquiry regarding seemingly simple phenomena. Take the following field note from an action in Froxán on the 24th of September 2023 with the *Brigadas Deseucaliptizadoras*:

> *I stood on the slope watching as Laura hit the small eucalyptus sprouts that were growing out of a trunk with a small axe. She meticulously but forcefully targeted the small, fragrant young sprouts and when she finished cutting away the new sprouts she went about slowly and with attention cutting and ripping off the outside of the tree's trunk. Making cuts horizontally, parallel to the ground, and with her gloved fingers ripping off the outside skin of the tree, all the way down to the root which she also uncovered.*

The above observation I wrote after participating in an action in Froxán, it illustrates how a practice of destruction is carried out. It describes an act of destruction as meticulous, detailed, focused, violent, and almost careful. How does Laura relate to this euclayptus? How is she imagining this action to serve the purpose of eliminating this tree? Why is she carrying out this practice to destroy the eucalyptus? When asked during such a work session, the answer is obvious – to kill the eucalyptus, to cut the nutrients that the tree needs to live. But not much else with regard to the meaning of actions that can be observed can be unearthed solely through observation or chatting during activities. It was during interviews that the meaning of acts of destruction gained more depth, or the so-called tropes mentioned earlier (Haraway, 2016). Observation does not enable access to the experiences and interpretations as interlocutors experience them, making interviews and the go-along method were better suited.

Interviews and the go-along also revealed certain shortcomings that were more effectively engaged with through observation and participation, making these methodological approaches complementary. There were various occasions during interviews that my interlocutors struggled with coherence within their narratives, self-doubt would shine through their stories and they would question what happened when, how, and be apologetic about not knowing the exact answers. In the context of Foucauldian studies, Fadyl & Nicholls (2013) have noted that interviews assume the interviewee to be capable of narrating experience in a coherent way, running in contrary to Foucauldian understanding of subjectivity as fragmented and produced by discourse as a present iteration of a set of discourses and knowledges that are historically situated. In this sense, according to such critique interviews should be approached with caution as the historical contingency of discourse and lack of a coherent self make the data gathered in this way problematic. Fadyl & Nicholls (2013) propose already existing sources of data like policy documents, blogs, recorded sound, and so on as a more trustworthy source of data as the researcher does not play an active role in bringing these into being – something I took to heart in

my historical analysis of forestry imaginaries. While engaging with the interview and walk-along method I noticed how respondents were at times not able to finish a thought, and would arguably go back to those parts of their discourse that are strong within their self-perceptions. In this sense, interviews and go-alongs miss out on aspects of interlocutors' experience that are not valued strongly by these interlocutors, but are informative to my research. Through observation and participation I sought to observe parts of actions that during interviews I could bring up (while in the walk-along method indicate directly) so that dimensions were brought into the interviews that interlocutors themselves paid little importance to yet did reflect the way they imagine the *monte*.

3.9.2 Ensuring research quality

Multi-sited ethnography follows people, objects, discourses, or even metaphors across different sites (Marcus, 1995). The distributed character of this method, its engagement with multiple sites rather than prolonged engagement in a singular one, requires rigor to ensure credibility of the research by attending to how and why choices were made regarding movement of following meaning across sites in a reflexive manner. Credibility and reflexivity are cornerstones to ensure research quality.

Credibility in my multi-sited ethnography, much like in ethnographies more broadly, was ensured primarily through triangulation of different methods. While triangulation can be considered as re-enforcing positivist notions of research (Blaikie, 1991) – e.g. through triangulating various methods the 'real truth' can be discovered, it can and is also used within constructivist research as epistemological dialogue (Hammersley, 2008). Here the purpose of triangulation, rather than ensuring validity in terms of approaching the most accurate explanation of a phenomenon, becomes the construction of different simultaneous worlds. As Flick (1998) writes, "triangulation was first conceptualized as a strategy for validating results obtained with the individual methods. The focus, however, has shifted increasingly toward further enriching and completing knowledge and towards transgressing the (always limited) epistemological potentials of the individual method" (p. 230). I used triangulation in the more original sense of complementary understandings of how actors constructed the *monte* and to engage deeper with particular realities to understand *how* they are *constructed*, and *understood*. For example, elaborating on the extract from my field diary shared in the previous section, during a session with the *Brigadas Deseucaliptizadoras*, the complementary use of participatory observation and interviews allowed me to understand better how embodied engagement with trees was experienced and understood by *brigadistas* while also physically observing how the process of destruction unfolded. In this sense, I sought to get closer to how *brigadistas* and other actors in this thesis make sense of their situation (Lincoln & Guba, 1982) drawing on different epistemic resources. The forms of knowledge explored to account for the historical shaping of the *monte*, in Chapter 4, on the contrary, relied on grey literature, legal documents, archival data, and more scientifically established ways of 'knowing' the *monte*. Understanding how these forms of knowledge constructed the *monte* and interacted with lived realities in subsequent chapters brought out the value of both comparison and in-depth engagement with different ways of knowing through different methods.

Engagement through different methods also comes the need to be reflexive in the process as my own interpretations and positionality affected the way the research was interpreted. By elaborating on my own biases and experiences as I did in the section *Positionality and reflexivity*, the partiality and situatedness of the knowledge created through this project has been made explicit (Haraway, 1988). The way I moved between sites brought out different sides of my positionality, e.g. as a new-comer to Galicia, a PhD candidate, a Dutch woman, and so on, which all affected and were constructed differently

according to context. The mobility and constructed nature of knowledge across sites required this ongoing interrogation of how my own presence shaped and was shaped in each setting (Clifford, 1997).

3.10 Conclusions and setting up what is to come

The use of methods adhering to the constructivist paradigm and multi-sited ethnography enable this thesis to follow imaginaries of the *monte* that are situated, dynamic, and contested. This chapter has elaborated upon how complexity, variability, and performative effects of imaginaries are recounted through different methods in this thesis, while also reflecting on how my research practices participate in shaping the realities I seek to understand. As Emerson et al. (2011) write, "a sensitive ethnographer draws upon her own reactions to identify issues of possible importance to people in the setting but privileges their "insider" descriptions and categories over her own "outsider" views" (p. 29) which in empirical chapters 5 and 6, I put into practice.

Rather than offering an objective, 'true-for-all' account, the work with commons communities (particularly Mourente) and the *Brigadas Deseucaliptizadoras* seek to provide accounts that ring true for my interlocutors. This means the empirical chapters are not written in a comparative way that seeks to contextualize claims or contrast them to other 'objective' sources, but instead deepens the accounts of those involved in my research to inquire into *how* particular actors imagine the *monte* and *why*. Such accounts thus consider how people draw on accepted (collectively created) ways of imagining the *monte* further reflected in practices. Before exploring how local communities (*comunidades de montes*) and activists (*Brigadas Deseucaliptizadoras*) imagine the *monte*, I first set out a historical chronology of institutional imaginaries of the Galician *monte*. This historical analysis sets the stage for engaging with communities, and also provides a more commonly done reading of institutional imaginaries without engaging with local communities, a shortcoming of imaginaries and political ecology work this thesis directly grapples with.

4. Chronicling historical institutional forestry imaginaries

In the following, I offer an account of the evolving imaginaries of good forestry that have shaped the Galician *monte* divided into three time-periods, namely the time before 1941, that between 1941 and 1970s (around the end of the Franco dictatorship in 1975), and that after 1970s, based on work by Picos (2017), (Vadell et al., 2016), (Rico Boquete, 1995), (Álvarez, 2010), Balboa López (1999), (Pemán García et al., 2017), and others. Drawing on existing studies that have used these time-frames, I term them the *Looking back* period (4.1), the *Looking forward* period (4.2), and the *Looking around* period (4.3), to draw particular attention to who does the looking and how a particular vision of forestry for national prosperity is formed over time. Complementing existing studies of Spanish forestry and State visions of prosperity through forestry, this chapter pays particular attention to the means through which these imaginaries are constructed and particularly who is doing the looking, how, and how appropriate publics are constructed in the process.

4.1 Period I: Looking back (1850-1940)

Between 1850 and 1940, Spanish forestry policy was oriented towards the restoration of a state of nature lost through significant deforestation (Balboa López, 1999; Picos, 2017; Rico Boquete, 1995), pursuing an imaginary of *forestry for the restoration of nature*. The causes of deforestation before this period are various and interacting; with authors diversely attributing it to population growth, mining, shipbuilding industry, increased grazing and agriculture, wars, fires, and the process of land seizure (*desamortización*) (Iriarte Goñi, 2017; Torrón, 2012; Vadell et al., 2016; Valbuena et al., 2010). Particularly, the liberal reforms and accompanying land seizure, though the Mendizábal (1836) and Madoz (1855) *desamortización* laws that targeted church and communal lands, intending to integrate them into the market economy (Bouhier, 1979) were an important precursor to the development of the imaginary of *forestry for the restoration of nature*. These laws were motivated by the idea of stimulating economic growth and strengthening the liberal state, making land-management more efficient and productive. Subsequently, in the beginning of the late 19th century, the perceived pressure on forests allowed the past to be imagined as a state of pristine nature which through rational, technocratic forestry planning could be restored. These methods of planning developed along with a shaping of society by forestry planners – considering rural populations as forestry destroyers – justifying particular interventions into rural peoples' livelihoods.

4.1.1 The (international) development of scientific forestry

The science of forestry management was developed in the 1800s in Germany, whereby ecosystems were rendered legible through simplified techno-scientific representations (Scott, 1998). This legibility allowed for ecosystems to become manageable, particularly for sustainability (Hölzl, 2010). Managing for sustainability meant rationing the harvesting of trees to certain periods, so that sustained yield was said to be guaranteed and thus forests were conserved (Umans, 1993). Germany was recognized throughout Europe as the leader of forestry science, and other countries sought to learn and replicate the rational exploitation of forests. In 1843, two Spanish forestry engineers Agustín Pascual and Esteban Boutelou were sent to the Forestry School in Tharand (Germany) to acquire the most advanced knowledge of forestry science. This renowned forestry academy was led by Heinrich Cotta, the father of modern forestry science. He is said to have systemized diverse forestry knowledge into a coherent doctrine with significant outreach across Europe and over time. Yet, systemizing knowledge is not a neutral activity without social implications, and indeed Cotta's practical outlooks on forestry were

accompanied by two prescriptions on how his perspective of forestry conservation would best be carried out. First, he considered it crucial for there to be a professional Corps in charge of overseeing forestry management for conservation; and second, he assumed the state as the legitimate owner and administer of forests (García Álvarez, 2010). The two Spanish engineers returned two years later, and in 1848, the School of Forestry Engineering was opened in Madrid (Álvarez, 2010).

After their return, the IBR (*Inspección de Bosques Reale*, or Royal Forests Bureau) was created which Pereda (2022) has shown to be a critical moment in the construction of Spanish territorial knowledge and particularly in producing communities of experts (Jasanoff, 2004a) endowed with techniques to produce standardized knowledge about diverse forests. German innovations in forestry science were looked up to and sought to be reproduced in Spain by Agustín Pascual, the director of the IBR from 1845 until 1868. In 1845, Pascual introduced German technical instruments to improve forest surveying in Spain. This led to standardized mapping practices, including the mandatory use of hectares and uniform cartographic styles. The shift replaced older, pictorial representations of vegetation with printed color blocks, aligning with broader efforts to systematize and modernize forest management. Pereda (2022) notices a clear trend toward standardization in both the empirical groundwork and the making of maps, where forestry surveying tasks became increasingly formalized and institutionalized. The primary way of ensuring standardized forestry knowledge to be produced was through the forestry school, where students learned how to make the standardized maps they would need to make in their ensuing professional lives. Subsequently, for any forestry position a title received from the forestry school was required (Pereda, 2022).

4.1.2 Imagining society for the pursuit of protecting nature through restoration

State power, particularly in the 19th-century context of Spain as discussed by Pereda (2022), viewed rural populations as a group in need of regulation, control, and modernization. Rural populations were often seen as backward, traditional, and inefficient, with their local knowledge and customary rights being viewed as obstacles to achieving the State's forestry objectives. In line with liberal tendencies at the time of the formation of the Liberal Spanish State, community management of the *monte* was seen as inferior to private use. The following excerpt comes from José de Echegaray, minister of Development, sheds light on the institutional view of such management, published in the *Gaceta de Madrid* in 1872:

> "Communal uses, neighborhood usufructs, and village-based land exploitation—all these socialist practices must disappear. The chaotic, irregular, destructive, and primitive use of land should be replaced by individual property, the seed of all progress, the guarantor of order, and an effective corrective against this form of rural socialism. Though not as turbulent or threatening as the socialism that emerges in industrial centers – amid the roar of machines, the smoke of chimneys, and the concentrated struggles of thousands of workers whose suffering and aspirations, like condensed steam, erupt in fury – this rural socialism, precisely because it is quiet and unassuming, and thus does not provoke a response out of fear, is no less harmful to the country. It corrupts the rural classes and threatens the future of the nation by weakening, consuming, and ultimately destroying its strength." (Echegaray, 1872 quoted in Blanco, 2002, p. 147; Lana Berasain, 2014, p. 170, *own translation*)

The excerpt demonstrates how state actors conceived of rural populations and their communal practices as primitive, chaotic, destructive and the like, binarily opposing them to progress and order, which could only be attained through individual property regimes or state ownerhsip. The quote furthermore shows the parallelism between communal management and the workers' movement in the cities, and how both are conceived as antagonistic to the interests of the nation by State actors like Echegaray, partial to bourgeois interests (Lana Berasain, 2014). The need to replace customs by more rational, scientifically-informed forestry practices was deemed necessary with rural populations considered destructive and in need of steering. This view further purported through the beginning of the 20th century where the shaping of rural populations took shape in institutional realms, like forestry assemblies, actively shaping a desired rural population apt for the State's forestry quest.

During the national forestry assembly in 1910, for example, forestry engineer Armenteras highlights the economic and social importance of reforestation, particularly pointing to the potential benefits if Spain were to achieve rich forests on land that is "absolutely unproductive or sustains only miserable pastures" (Revista de Montes, 1910, p. 340). Miserable pastures were, in his account, complemented by moors and wastelands that were "mute witnesses of neglect and poverty". In his view, citizens were incapable of managing the land in their own interest, since they were "frivolous, sensational", and unable to engage with "mature matters" (p. 340). Such mature matters were understood to be the purview of forestry science, and as such situated outside the grasp of common people. In these successive articulations of roles and responsibilities of State and Science, forestry is increasingly understood as a protective endeavor to safeguard nature and restore what had been destroyed.

In function of the imaginary of *forestry for the restoration of nature*, in 1915, the *Dia del Arbol* (tree day) was institutionalized through a royal decree obliging all Spanish municipalities to celebrate it (Monteagudo, 2018). In 1924, a royal decree specified that each municipality would need to plant at least 100 trees (Mozo, 1927). This ceremonial day sought to teach children the importance of nature and trees, figuring into State propaganda focused on the youth to sensitize them to the State's forestry mission (Seijo, 2009). In *El Arbol y su Fiesta* (1927), Salvado Mozo elaborates on how the festivities taking place on this day foment specific knowledge about trees and concomitantly forge 'love' for these trees, which should result in people desiring to conserve and grow more trees (p. 10). As such, the *Dia del Arbol* forges both the societal importance of trees and appropriate response-able subjects. A fictional dialogue makes explicit the functional dimension of celebrating this day for the legitimacy of the State's reforestation mission, where the character Maria asks:

> "And since [*La Fiesta del Arbol*] is so good and beautiful and so useful to everyone, why should we not support the authorities that govern us more, so that this Feast is celebrated with the greatest pomp and solemnity in all the towns and cities?" (p. 10, own translation)

The difference between the youth, the elder rural populations, and urban people is telling in State forestry communications during these times (Seijo, 2009). Elder rural people are seen as incompatible with the State's reforestation program and the desirability of people leaving rural areas, which comes to dominate the demographic situation in Galicia in the 1950s, is hinted at. Picos (2017), for example, in his account of the reforestation of Galicia in the 20th century records an agricultural congress in 1906 in Lugo, where use of the *monte* is said to be adequate only if it does "what science dictates" and that "descendants of forestry destroyers" (p. 233) face their just punishment by having to emigrate.

Forestry outreach efforts not only focused on loving trees for the sake of nature, but sought to strengthen the idea that forestry as a scientific endeavor meant social progress. In this sense, forestry outreach efforts, such as school visits to tree nurseries, aimed to promote a positive view of forest plantations. A notable example is the 1929 visit of Antorcha school students, who were given eucalyptus saplings to plant at home. In this sense, forestry as plantations sought to be normalized, with scientific knowledge shaping what good forestry looked like (Copena, 2024).

In 1910, forestry engineer Armenteras, too, centers his discourse around protecting nature from an abusive population, arguing for the creation of a Forestry Corps that would pertain to the state to protect Nature and simultaneously be indispensable for the national economy (Revista de Montes, 1910):

> "That there must be a Forest Corps belonging to the State, free of all kinds of easements and obstacles, essential for the national economy, cannot be doubted by anyone who has studied these problems [...] it is an economic absurdity, charging the State with the role of tutor [...] at the end of fifty years it will have spent some 400,000,000 pesetas, and not get any return on the expense made, and, what is worse of all, at the end of this time it will have to continue its role as guardian over eternal minors, who find it perfectly fine to collect benefits without putting anything from their part." (original in Spanish, own translation)

Scientific forestry management is praised for its economic, social, and environmental potential with its recommendations to be carried out by a separate entity; a national Forestry Corps – in line with German scientific forestry's prescripts (Alvarez, 2004) – rather than rural populations who are deemed 'eternal minors'. The creation of a Forestry Corps belonging to the State is a liberal reform that assures engineers the freedom to act in what they consider to be in the benefit for society. Economic and environmental benefits from forestry management are said to trickle down to society which had already been 'enjoying the benefits without paying for them' (paraphrased from Revista de Montes, 1910), in addition to the State enjoying economic returns.

4.1.3 Classifying and rationalizing land to be protected

In 1908, a law of repopulation was passed to develop a catalogue of Protected Areas (del Corral, 2017) which would exist in parallel to the Catalogue of Public Utility lands (Pérez-Soba & Picos, 2001). The lands classified in this catalogue would mandatorily need to be reforested, independent of their being privately or publicly owned. Private landowners thus had no say in the matter when their lands were classified as such. Reforestation was meant to be assisted through technical aid, seeds, plants, and tax exemptions to landowners in protected areas (Rico Boquete, 2018). However, the materialization of this law was negligible due to social resistance and protected forests never became a success nation-wide (Boquete, 2018; Pérez-Soba & Picos, 2001).

Under Miguel Primo de Rivera y Orbaneja, who came to power through a military coup in 1923 and ruled Spain until 1930. Engineers during this period attributed the unproductivity of the *monte* as fundamentally caused by the absence of an effective authority. Where authority can be understood as the actor that organizes the field in which forestry engineers can freely operate; the State as facilitating the interventions into forests while being legitimized by engineers' plans to do so. Under Primo de Rivera y Orbaneja, the fifty-year plans developed in 1910 and 1912 were revisited as they resonated with De Rivera's visions of Spain's national restoration and public works. Until 1930 the planification

and the purposes of these forestry plans would be stable and gain ideological legitimacy due to the dictatorship.

The plan composed by Tomás de Villanueva y Aldaz in 1924 is considered the first step toward a workable national reforestation strategy (del Corral, 2017). As in previous plans, Villanueva's approach centered on the need to rationalize Spanish territory, emphasizing the State's crucial role in implementing reforestation efforts. In accordance with other engineers writing at the time, he positions private owners of land as abusive and antagonized them in the quest for repairing a "country that had been battered in its nature and its economy" (Gómez Mendoza, 1992, p. 207 quoted in Del Corral, 2017). Balancing economic objectives with environmental ones, interventions into the *monte* are framed as serving the needs of a 'social order' through engaging in public works like fixating of dunes, reforestation along water basins, and torrent control (Revista de Montes, 1921).

Villanueva's plan makes explicit the distinction between agriculture, forestry, and pasture land-uses, which previous plans had left rather obscure, to argue for agricultural intensification to liberate 'space' for afforestation and "reduce the wood deficit" (Revista de Montes, 1924, p. 252). This rational framing of land as a manageable resource for agriculture, grazing, and forestry carries several implications. First, treating these activities as equally subject to rational management suggests they are commensurable and interchangeable, granting power to those who can calculate, control, and act within this framework. Second, the authority to define these rational divisions also brings normative power, shaping not just how land is categorized (or understood) but also how activities like farming, grazing, and forestry should be conducted. Finally, this conceptualization reduces land to a neutral, extractable unit for commodity production, disregarding its complex socioecological dynamics as understood through direct, lived experience. In this sense, following Demeritt (2001), enumerating technologies and representational practices contain within them political objectives and future possibilities for forestry planning, and here the rationalization of land to be made manageable for purposes both economic and ecological factors into the imaginary of *forestry for the restoration of nature* and further imaginaries as we will see in the next sections.

4.1.4 Engineers as speaking the language of nature

In 1910 the inauguration of the Forestry Assembly took place, with Minister of Public Works Calbetón acknowledging the historical moment that they were witnessing, namely the first moment where the government presented itself so "ready to attend to the needs of the engineers". He affirmed that "the minister is not a technician and does not know in what way or in what form the desired labor could be done" but assumes the labor would be done with "great patriotism" by the forestry engineers. He continued with this theme, noting that "nobody had presented themselves until now ready for these conditions", and that what the engineers needed, "the government [would] bring it translated in money" (Revista de Montes, 1910, pp. 337). Such discourse not only positions the State as being in the service of the forestry engineers' interests, but also lays the foundations for the normalization of scientists as uniquely capable of defining the problems of the monte, and responsible for framing solutions accordingly.

The plantations that served to produce timber for the industrial growth in the late 19th century were seen by certain engineers as a crime against nature. Such framing attracted legitimacy to scientists as speaking the language of nature that neither the State nor citizens could. A prominent engineer from this period is quoted by (Rico Boquete, 2018) writing about a visit to a forest saying "we have not

perceived a true sensation of a forest in any of these pines" to continue to refer to their "artificial origin" (Ximénez de Embún y Ceballos, 1939, p. 466, quoted in Rico Boquete, 1995, p. 157). He continues by writing about the need for the "resurrection of the true forest" and indeed the fundamental role of Nature in the productive future of the nation and its forests.

In parallel and in service to the development of scientific discourse, the way desirable property rights were imagined also changed through the establishment of the modern State. Resonating with Scott's (1998) foundational work on State formation and scientific discourse, so too did the founding of the modern Spanish State seek to reinforce State control over communities and what had priorly been their lands. Drawing on Balboa's (1990) impressive historical analysis, the third point of Royal Order of the 22nd of May in 1848 states "That all private and common forests, whatever the time and origin of their acquisition, are subject to the general provisions that govern today, by virtue of which the neighbors are not authorized to proceed with the exploitation of their trees, but this must go through the Town Councils, which are the legitimate administrators of communal interests in accordance with the Law"[1] (p. 93). The creation of municipalities in the middle of the 19th century was an important instrument in the usurpation of common lands, a process which Galicia, as a unique case, was able to avoid succumbing to completely. Balboa (1990) ascribes this exception to the inability of the State to break the link between Galician rural populations and the land on which their household economies depended. The geographical dispersion of villages, or *aldeias*, made it spatially difficult for municipalities, who now gathered several *aldeias* with their respective *montes* into one municipality, to impose uniformity assumed by a central State onto the *monte*.

In 1935, forestry engineers were finally given what they had long been wishing for through the creation of the Patrimonio Forestal de España (PFE) as its own legal entity with administrative autonomy and funded by the State (Rico, 2008). Its creation was hailed as "a moment of light coming through a crack in the cloudy sky of Spanish forestry" (Montes e Industrias, 1934, quoted in Del Corral, 2017, p. 69)[2]. However, due to the onset of the Civil War, the PFE is said to have been effectively founded in 1941 (del Corral, 2013) with sight shifting from restoring a lost past towards attaining an industrially productive future.

4.1.5 Conclusion: How looking back prescribes monte's need for State control

Forestry planning, as this section has shown, was oriented towards the rehabilitation of forests in accordance with a memory of 'true' forests that had existed before it was destroyed by unknowledgeable publics. Forestry scientists in this period are endowed with the ability to look back at how nature was before rural populations committed this destruction, with this ability to look back is accompanied by the capacity to prescribe how this pristine state of forestry can be attained again. The

[1] Que todos los montes de propios y comunes, cualquiera que sea la época y origen de su adquisición, están sujetos a las disposiciones generales que hoy rigen, en virtud de los cuales los vecinos no están autorizados para proceder al aprovechamiento de sus arbolados, sino por medio de los Ayuntamientos, que son los administradores legítimos de los intereses comunales con arreglo a la Ley." (Balboa,1990, 93).

[2] "Un roto, en el nublado cielo de la vida forestal española, deja atravesar la luz que lleva el optimismo a los que ansían ver alcanzados los problemas tan necesarios, tan claramente indispensables para el restablecimiento del equilibrio económico y social de la nación. La repoblación forestal, el proyecto llamado del Patrimonio Forestal de España va a ser una realidad" (Montes e Industrias, 1934)

methods to measure, map, and plan the areas for restoration – establishing areas of public utility and justifying the expropriation of its inhabitants – allowed for repopulation to take on a life of its own. The imaginary of re-population, restoration, and repair already showed signs of the desire for expansion in the plans of the engineers in pursuit of the imaginary of *forestry for the restoration of nature*, justifying such expansion in the name of protecting and restoring nature. The imaginary of returning to a lost nature which requires state control over land (as reproduced by forestry engineers and scientists) seems to sit in quiet contrast to state-led disentailment and sale of municipal, church, and common lands through the *amortización* laws as the latter sought to raise revenue for the State to finance its debt by privatizing lands. Yet overtly, both by State and scientific actors, local communities are repeatedly considered as inept at managing forests and state uniformity in local governance is encouraged through territorial rationalization and redrawing the maps of local administrations to broaden their reach (and thus control, and tax revenues). So while on the one hand land disentailment privatized public lands, the actual management of land by local communities was considered inept in pursuit of the sociotechnical imaginary of *forestry for the restoration of nature* which required a strong forestry corps to decide over how forestry was carried out. Forestry scientists imagined such good forestry to require a mixture of tree species of distinct ages and characteristics to be grown in the *monte*, and the banning of logging (and in many cases all other uses) by peasant populations and land-owners. Additionally, the shaping of social actors as appreciating and respecting nature meant trees were defined by scientists and their protection warranted the cultivation of appropriate practices. Finally, the sociotechnical imaginary of managing the *monte* to restore lost forests materialized in the organization of these works through the creation of the Forestry Corps, or the Patrimonio Forestal del Estado in 1935, seeking to restore a lost nature through forestry management. This State organ would undergo a significant ideological change in the next period, under the dictatorial regime of Francisco Franco, where the State would still be the primary actors in achieving prosperity through good forestry, but now the means to attaining said prosperity was fully through productivism.

4.2 Period II: Looking forward (1941-1970s)

The *Looking back* period had justified forestry planning, land-seizing, and the development of a Forestry Corps in pursuit of restoring a (destroyed) nature, complemented by economic objectives. The subsequent period carries forward the assemblage of actors doing the looking, the organizing, and the carrying out of 'good forestry' but alters the way vision is oriented towards a different, contingent sociotechnical imaginary of what the management of the *monte* can achieve for society. Catalyzed by the coming to power of Francisco Franco, who ruled Spain as a dictator from 1939 until his death in 1975, forestry came to serve national needs of prosperity and the making of a grand nation – in pursuit of the imaginary of *forestry for productive prosperity.* Vision becomes oriented forward, with a shift away from ecological restoration towards a past that had guided the imaginary actors positioned themselves within in the previous section, towards the potential for forestry to service national prosperity through economic growth complemented by an agenda for restoring Spain's national wealth (Álvarez, 2010; Rico Boquete, 1995). Such an imaginary is forward looking, the desire to achieve a grand and prosperous future carries forth the imaginary of restoring nature but considers this nature in light of the Nation and making the nation great. As Martin Brugarola writes in 1950 in the *The Forestry Economy*:

> "The whole of Spain asks for trees because the arboreal vegetation represents life for most of its regions, the resurgence for others completely dead, the elimination of much rural misery, and for the entire nation it symbolizes progress, wealth, splendor and power." (Brugarola, 1950; own translation) [3]

4.2.1 Accelerating towards the future

On March 10th, 1941, the Patrimonio Forestal del Estado (PFE or State Forestry Heritage) was reinstituted under dictator Franco, following a different imaginary of good forestry for society. The PFE's purpose became to restore, conserve, and increment Spain's forest area (Picos, 2017) in accordance with the idea that economic autarky implies political autarky (Rico, 2000). The PFE created the National Plan of Reforestation (Plan Nacional de Repoblación Forestal - PNRF) which aimed to increase the forest area in 100 years by six million hectares, based on estimations from 1933-1938 and sought to meet an increasing demand of 5 million cubic meters of wood per year (Vadell et al., 2016). The performative dimension of modelling forests according to an assumed growing demand conditions the ways such reforestation was organized, and the imaginary of a grand Nation rested upon the consideration of large-scale productivism and restoration.

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[3] "Y pide arboles España entera porque la vegetacion arborea representa la vida para la mayor parte de sus regiones, el resurgimiento para otras completamente muertas, la eliminacion de mucha miseria rural y para la nacion entera simboliza el progreso, la riqueza, el esplendor y el poderio. Dieciocho milliones de hectareas despobladas o pobladas insuficientemente esperan en España la redencion del infierno de un sol implacable, sin sombra y sin proteccion."
"Los geologos piden arboles para que no haya torrentes; los agronomos, para la frescura de los campos; los sociologos y conolizadores, para hacer de ellos la celula creadora de todos los bienes de agro; los Ingenieros de Montes los piden como la mejor inversion y la mejor caja de ahorros que pueda existir. Y los pide el comercio para tener cajerio, las casas para viguerio, los entibadores para las minas, el ferrocarril para traviesas, las comunicaciones telefonicas para postes, los industriales para sus multiples aplicaciones."

The creation of the PFE meant that any repopulation activity had to occur in consortium with the PFE, whether it concerned private or public partners. It is said that such consortiums were very easy to engage in and entailed no costs for private owners (Brugarola, 1950). The PFE therefore adopted a central position in the reforestation of Spain, and its methods of mapping, its vision of wellbeing of the nation attainable through forestry, and the corresponding ways of intervening in social life were able to become normalized. As opposed to the visions of the engineers pursuing the imaginary of *forestry for the restoration of nature*, the legally established PFE in 1941 transformed Spanish forestry to pursue a productivist imaginary, evidenced, for example, by a transitory article of the law that established the short-term objective of directing reforestation works to areas of low employment, and using fast-growing species for reforestation (Picos, 2017). Indeed, the subordinate director of the PFE is quoted in Gimenez Radiz (1950) as saying "whenever it has been possible and the necessary lands have been available, the Patrimonio has repopulated and will continue to repopulate with fast growing species"[4] (Gimenez Radix, 1950, p. 3 quoted in Rico, 2000, own translation). These practices stand in contrast to the recommendations that were dominant in the *looking back* period, where the restoration of nature through forestry meant local conditions were taken into account, known in rational scientific techniques.

4.2.2 National prosperity through cellulose

The imaginary of forestry for a great, independent nation under Franco gained strength through finding resonance with forestry engineers working under other totalitarian regimes. Ignacio Echeverria, an engineer who played an important role in Spain's Forestry Plans, had regular contact with Italian engineer Aldo Pavari who advocated for productive forestry "to place the forests and the mountains in the great movement of progress which characterizes the Fascist era" (Pavari, 1934, p. 75). In an article published in 1924 in the Forestry Magazine (*Revista de Montes*) by De Madariaga, a study by Pavari in 1923 is drawn on where Eucalyptus is investigated as the tree that would facilitate national independence as its uses spanned from being transformed to barrels to serving as train tracks to high quality firewood (De Madariaga, 1924).

Later, in 1938, Aldo Pavari would deem eucalyptus the "autarkic tree *par excellence*" because of its characteristics as fast growth and potential for the production of pulp for cellulose (Rico Boquete, 1995). In service of an imaginary of *forestry for productive prosperity*, eucalyptus' ability for fast-growth as an essential, intrinsic quality was extremely attractive to fascist regimes like that of Mussolini and Franco who imagined an independent nation through self-sufficiency. Eucalyptus meant Spain could be self-sufficient in the production of paper, textiles, explosives, paint, and other chemicals. In 1940, Spanish engineer Echeverria echoed Pavari's words calling eucalyptus and pine the foundation of the cellulose autarky of the Nation (Rico Boquete, 1995). The so-called Cellulose Plan was published in 1940 and used technologies from other totalitarian countries, namely Japan, Germany, and Italy, for the planned production of cellulose. Eyes were set on cellulose's multifunctional uses which included the production of paper, fabric, and explosives, amongst other materials. The actor best fit for carrying out such production in the quest for national autarky were imagined to be private companies, whose

[4] "Siempre que ha sido posible y ha dispuesto de los terrenos necesarios para ello, el Patrimonio ha repoblado y repuebla con especies de crecimiento rapido". (Gimenez Radix, 1950, p. 3 quoted in Rico, 2000)

protagonist role would be facilitated by the State through forced expropriations of local communities, limiting imports of cellulose, and financial investments (Rico Boquete, 2001).

While previously mapping had occurred to achieve a backward-looking imaginary of restoring nature by matching ecological properties of trees to local ecological conditions, mapping now matched zones to maximum productivity for forward industrial growth. In 1940, Echeverría concretized the division of forests for maximum productivity, namely "the basin of Bidasoa, Guipúzcoa and Vizcaya is a zone of expansion of the insignis pine; Santander and the Asturian east is of eucalyptus and the Asturian west with the entire Galician coast is of pinaster" to form the basis of a cellulose autarky (quoted in Picos, 2017, p. 242). This planning of zones for productivity was accompanied with planning for economic growth, with the dictatorial Government in 1940 declaring the fabrication of cellulose as being in "national interest" (Directive 15/5/1940 quoted in Picos, 2017, p. 247) citing the military use of cellulose as serving imperial dreams inspired by the success of the German army (Rico Boquete, 2001) hinting at the capacity for growth and expansion inherent to this endeavor. Such purposing of areas of land towards serving economic growth materialized in the Galician province of Pontevedra when in 1947, the Deputation signed an agreement with a group composed of Celulosas de Galicia S.A. and the Papelera Española S. A. to assure an adequate supply of raw materials needed for the production of their proposed factories. Indeed, Picos (2017) writes about the way private companies proposed and achieved consortiums with the State to be guaranteed future use of forest masses, allowing for industrial growth to be secured. In 1941, the Instituto Nacional de Industria (INI – National Institute of Industry) was founded which would take charge of the creation of industrial companies.

4.2.3 The importance of rational scientific knowledge

During this period, the influential forestry engineer Mackay published an article titled *The Ordering of the Monte and the Scientific Method* (1945). Here Mackay firstly lays out the superiority of scientific knowledge to then venture into the need to 'order' the *monte* according to its economic nature. The engineer notes the importance of establishing economic needs and how these needs are to be satisfied through a "fruitful exploitation of the soil" (p. 279). He emphasizes the importance of an Inventory to be created by experimenting and observing phenomena in a single *monte* to then generalize this to consider the potential for consistent production and maximum return across the Spanish territory. The situation in Spain is contrasted with countries that have "not felled without hesitation" (p. 280), where *montes* are used as field sites to discover and prove laws that can then be applied across space; they are "scientific laboratories" (p. 281). The designating of *montes* as scientific laboratories are important performative occasions, both in a political and epistemic sense (Jasanoff & Kim, 2015) as they legitimize a particular form of knowledge based on measurement, description, prescription and proscription. Indeed, the coming together of the *monte* and the scientific method with economic priorities created conflicts based in fundamentally ontological and normative descriptions of what the monte is and which forms and ways life should be cultivated, sustained and eliminated within its boundaries and in the name of what political claims.

Mackay positions his plans as needing to be calibrated to the needs of an "external economy" (Mackay, 1945, p. 280), creating the idea of an 'economy out there'. This homogenization of domestic needs to sustain life into an external economy which comes to dictate the optimum use of the *monte* is a telling shift in this period, and one that also facilitated the orientation towards productivism for export, and subsequently, arguably, the shift to far-away ecological needs to dictate domestic practices (in the next period). In addition to the acknowledgement of an external economy which forestry science and

planning should serve, Mackay also cites Lucas de Olazábal, a prominent forestry engineer who lived from 1829 to 1899, when describing that the majority of *montes* still suffer corrosive use of neighbors as “deadly obstacles … against the Homeland (La Patria)” (p. 281).

The positioning of peasants as destructors of forests shaped the imaginary of *forestry for the restoration of nature* and was translated towards this new period where forestry has come to serve productivism, and peasants are still positioned destroyers of nature. During a general forestry assembly in 1953, for example, the then director of the PFE (Patrimonio Forestal del Estado), Martínez Hermosilla, proclaimed that the biological balance in the *monte* had been disturbed. He attributed this imbalance to decades of destruction by rural populations, due to lack of technical planning. During this assembly he proclaims that ‘the time of absenteeism in the forests is over’ and proposes the antidote to be active intervention by the State to realize an extensive plan of reforestation which would in ‘ten years significantly change the agricultural physiognomy of the country’ (Martínez Hermosilla, 1953, p. 40, own translation).

4.2.4 Economic growth and internationalization

In the 1950s, Spain adopted a ‘developmentalist’ economic strategy (*Desarrollismo*) characterized by openness to the international economy and a shift away from autarchic policy towards liberalization (Campos, 2004). The international political landscape changed with the Cold War ending the antifascist consensus of Western countries in favor of unity against communism. Subsequently, in 1950 the United States lifted its diplomatic boycott against Spain; in 1953 Spain entered UNESCO; in 1955 Spain joined the UN; and in 1953 the country signed an agreement with the US guaranteeing military and economic assistance (Großmann, 2014). The 1953 Cold War agreements between the USA and the Franco dictatorship implied economic and technical aid from the USA, in forms of technology transfers and expertise on forestry issues (Seijo, 2009). This transfer was oriented specifically to afforestation (Rico, 2008), substantiating a growth-oriented ideology guiding Spanish forestry policy.

For forestry the shift from autarky to an open market economy meant the economy’s demand that sought to be satisfied by the exploitation of Spanish forests changed from national demand to international or at least European. The enlarged scale with which the economy and forestry were approached implied methods of planning and forestry science that both served these scales and made them legible. International organizations gain importance during this time. For example, a study published by the FAO in 1953, was translated by Juan Lang and published in the popular journal *Montes* to share the ‘predicted difficulties for 1960 if the current level [of forestry production] is not elevated’. The study calls for intensification of forestry in order to meet the predicted rise in demand for timber in 1960 with forests that have been destroyed by wars. In addition to the wreckage brought on by wars in Europe, the temporality of producing timber is also used to motivate intensification of production. The trees planted to “substitute the old virgin forests” (Lang, 1953, p. 455) would not reach commercial size in the timespan the forecasts would require timber. This problem is said to partly be solved by intensification of current production and the 2.5 million hectares of virgin forests still left in Europe, “most of which are exploitable” (Lang, 1953, p. 456). The problem imposed by scarcity on meeting the (predicted) growing industrial demand for timber is approached through intensification of current plantations, expansion into areas that do not hold forests, and the cutting of virgin forests – with the study citing Germany as an example of this objective as they produced 6m3 of timber per hectare in 1930 while Spain in 1950 was producing only 2m3 of timber per hectare. The future of Europe and its implied prosperity is intricately tied to the future of Europe’s forests which are imagined to firstly hinge

on a past plagued by destruction, much like the narrative professed in the Restoration period, and secondly offer the hopeful potential for growth through intensification and expansion already successfully carried out in Germany.

In 1952 the State Forestry Corps (PFE) usurped the Hydro-Forestry department which had, until then, coordinated the afforestation around water basins. Between 1950 and 1970, almost a thousand new water reservoirs were built, increasing the amount of water stored from 6 billion m3 to 39 billion m3, which corresponded to the developmentalist plans of the State and also meant a huge surge in afforested areas. In 1952, motivated by discourses of scarcity and excessive demand for timber, a special commission was created to coordinate the afforestation with fast-growing species in accordance to needs of the cellulose and pulp industries (Iriarte Goñi, 2017). Iriarte-Goñi (2013) estimates the amount of timber extracted from forests in Spain to have grown by a factor of three between 1960 and 1979, with a decline in timber use by households and a significant increase of demand for paper pulp both nationally and internationally.

4.2.5 Further commitment to industrial growth

During this time in Galicia an industrial cluster developed in pursuit of the imaginary of *productive prosperity*, as this imaginary enveloped more than solely forestry. A commission (*Comisión Gestora de la Celulosa - CGC)* concerning solely the management of pulp was created within the network of the Nacional Institute for Industry in addition to an organization for technical advice regarding pulp (*Consejo Técnico de la Celulosa*). The State Forestry Corps, which entered into consortia with actors in its mission for afforestation, supplied an inventory of the available timber so that the possibilities for extraction could be known to these private parties (Picos, 2017).

Further conditions supportive of systematic reforestation were created by the law of April 7th, 1952, 'on aid to the free initiative for the reforestation of public and private property lands'[5], which articulated the "extraordinary importance" (p. 1586) of the work that had been done by the State Forestry Corps (PFE) and legitimized further State intervention into the *monte*. The law frames a precedent of successful repopulation in terms of a "highly reproductive investments" in addition to "beneficial repercussions of this [reforestation] work in the social field and the general economy" (p. 1586). The joining of economic wellbeing and social wellbeing sets up the ability for the State to legitimize further repopulation works. It can adopt "effective measures to remove any obstacles that oppose or hinder repopulation" (p. 1586) in order to achieve "a growing increase in its [repopulation] execution rate" (p. 1586). The motive of growth further legitimizes forced repopulations of lands with uncooperative owners, as can be read in article 10 of this law (1952):

> "In the event the owner […] does not carry out the repopulation of it in the manner and terms indicated of the State Forestry Corps, it [the State Forestry Corps] will proceed to execute such repopulation with its own means and organization, establishing for this

[5] LEY DE 7 DE ABRIL DE 1952 sobre auxilio a la libre iniciativa para la repoblación forestal de terrenos de propiedad pública y particular. https://www.boe.es/gazeta/dias/1952/04/08/pdfs/BOE-1952-99.pdf

purpose, and with a mandatory nature, the corresponding consortium […] and resorting to forced expropriation in the case of privately owned forests"[6] (p. 1587).

In the Forestry Law of 1957 the forced expropriations of common lands deemed "public utility" (p. 11) is further made explicit[7]. According to Seijo (2005) drawing on Serrano (1990) in the period between 1940 and 1959 only 354,240 hectares of Galician land was considered public forest land and 1,142,860 hectares were considered private forest land (including communal land). As a result of the 1957 law, however, the commons were included in the forest inventory as public utility forests and thus became subordinated to the local and central state administrations. Thus in 1960, the amount of 'public utility land' had grown to 902,869 hectares and the amount of private property had fallen to 594,231 hectares. The public utility lands were mandatorily afforested. The way public utility lands in the *Looking back* period referred to recuperating biological processes and landscape functions, in the *Looking forward* period its content changed to the potential for industrial growth. The framing of peasants was similar, with more serious methods of ridding the lands of its inhabitants being legitimized.

In addition to forced expropriation, forestry laws provided financial incentives to motivate land-owners to plant trees. The State Forestry Corps (PFE) 'expanded' the land that was considered public property by usurping common lands and subsidized land owners up to 75% of the afforestation costs. Fast-growing species were planted to enjoy these subsidies, in addition to policies explicitly promoting these species (particularly pine and eucalyptus). In parallel, 1950 marked the start of pulp factory Sniace in Torrelavega (Cantabria), in 1952, FEFASA started pulp production in Miral del Ebro (Burgos) and in 1957 the Spanish National Institute of Industry (INI) created the National Cellulose Companies (ENCE) in Pontevedra, Huelva, and Motril. The forestry techniques of systematic monocultures of even-aged strands of trees were justified by this forward-looking imaginary of *forestry for prosperous productivity* where the PFE's consortia with these industrial parties promised future timber masses to be available.

4.2.6 Conclusion: looking forward towards a moving horizon

The *looking forward* period characterized forestry in the *monte* as serving progress and splendor through productivism in pursuit of the imaginary of *forestry for productive prosperity*. In this period, tree species no longer served to meet local ecological conditions through mapping by forestry scientists like those the previous period had intended, rather the tree species' intrinsic characteristics of fast growth, like eucalyptus and pine, were hailed. The implementation of the forestry vision of productivity was able to occur in a centralized manner through the creation of the Patrimonio Forestal del Estado

[6] « Declarada esta obligatoriedad, y en el caso de que el propietario, bien con sus propios medios o bien haciendo uso de los auxilios que reciba de la presente Ley, no realice su repoblación en la forma y plazos que se le señalen pof ei Patrimonio Forestal del Estado, se procederá por éste a ejecutar tal repoblación con sus propios medios y organización, estableciendo a tal efecto, y con carácter forzoso, el correspondiente consorcio, a tenor de lo que a este respecto establece el artículo dieciséis de la Ley de diez de marzo del mil novecientos cuarenta y uno, y recurriendo a la expropiación forzosa únicamente en el caso de tratarse de montes de propiedad particular » (Franco, 1952, Boletin Oficial del Estado).

[7] « Cuando se trate de montes comunales o de propios, las servidumbres y ocupaciones podrán ser concedidas cuando proceda por la Administración Forestal previo informe favorable de las Entidades locales si estuvieren declarados de utilidad pública. » Ley de 8 de Junio de 1957, de Montes BOE 154, de 10-06-57;

under dictator Franco which was involved with all public and private afforestation efforts. The PFE followed the State's vision of prosperity through growth and made no secret of their interventions to serve productivity, with them explicitly opting for fast-growing species to be used for afforestation. The scope of *looking* expanded with the marrying of productivity and wellbeing, where productivity initially served national needs to then shift to a larger, international economy in addition to aiming for a distant horizon. Management of the *monte* to serve growth meant an expansion of scale that concentrated further the ability, capacity, and indeed authority of certain knowledge and expertise to be deemed superior in ordering the *monte*.

4.3 Period III: Looking around (1970s – now)

In the 1970s, in the global North, the rise of environmental movements recognized the impossibility of continued economic growth on a finite planet, with publications like the Club of Rome's *The Limits to Growth* and Rachel Carson's *Silent Spring* igniting popular movements and institutional change (MacKenzie, 1998). The notion of 'sustainable development' was popularized in the 1990s (Elliott, 2012), yet within the world of forestry the founder of the concept is considered to have been Hans Carl von Carlowitz, who in 1713 wrote about sustainable forestry and sustainable development (Hahn & Knoke, 2010). Forestry scientists were concerned with the development of optimal rotation schemes of trees to create a never-ending sustainable extraction of resources (Hölzl, 2010). The marrying of social, environmental, political, and financial objectives under the umbrella term of sustainable development (Umans, 1993) was enabled through the capacity of *looking around* to situate forestry within webs of life, economies, social systems, local communities, nations, and indeed future generations' quality of life. The way sight, in this most recent period, is oriented *around* refers to the ability to conceive of multidimensional objectives to be fulfilled through forestry, like economic growth, ecological restoration, biodiversity conservation, and climate mitigation – to name a few objectives. Additionally, these objectives to be achieved through forestry, as we will see, have become more global in vision – where forestry serves the Nation but also has become embedded in international agreements and global visions of desirable futures. In this sense sustainable development also brought a global perspective to forestry that hitherto had not been defining of forestry practice. I term the imaginary guiding forestry practices, discourse, and interventions *forestry for sustainable development* with sight widened both spatially and temporally.

Educating the public to protect nature

In 1971, the Institute for the Conservation of Nature (ICONA; *Instituto para la Conservación de la Naturaleza*) was founded, four years before the death of dictator Franco. As the result of a profound reform within the Ministry of Agriculture, the creation of ICONA sought to counter the fragmentation within the ministry and its departments (García & Rodríguez, 2017). The previously separate domains of agriculture, forestry, and livestock were merged into an autonomous governing body concerned with the conservation of nature (Ortuño, 1975, p. 221 *quoted in* García & Rodríguez, 2017). This vision of conservation was comprised of activities related to forests, wildlife, and natural parks – to name a few (Ortuño, 1975). With regard to forestry, ICONA continued in line with the PFE's objectives, repopulating the *monte* with fast-growing species (Alvarez, 2004; García & Rodríguez, 2017), while creating various natural parks to conserve nature and for citizens to enjoy (PFE, 1970 *quoted in* García & Rodríguez, 2017).

Whereas the productivist side of ICONA's program superseded its conservation efforts, with ICONA being the primary actor responsible for the massive afforestation with eucalyptus in Galicia (IBADER, 2020), the organization also created various protected areas. In the presentation of their program in 1976, published in the journal *Montes*, they emphasize their commitment to initiating more and taking care of existing protected areas. In addition to the ecological importance of forests, their social value is also said to be essential for their protection and is reliant on a particular definition of 'social'. Indeed, the social value of forests rests on the assumption that ICONA and previous State Forestry actors are accurately aware of what such social value consists of, and how their educating the public can further this value. In ICONA's program (1976) they put forth the conditions required for their policies to be successful, like for example "a collective civic awareness of the importance of an environment suitable for life, knowing that forests have value and offer great advantages…" (ICONA, 1976, p. 52). The importance of ICONA in creating natural parks is echoed by forestry engineers, like Martinez (1978) whose article in the journal *Montes* further states the organization's role in creating recreational areas to facilitate the "stay of human beings in the *monte*" (p. 197). In this article, ICONA is said to "prepare the tree mass for the entry of the human mass" and that such entry implies "much time, much trouble, and much damage to the forest"[8] (p. 197).

In 1995, ICONA was replaced by the *Organismo Autónomo de Parques Nacionales* (OAPN or National Parks Autonomous Agency) and today the institute's history is seen as one filled with shadows and "few lights" (IBADER, 2020, p. 61) as it was the primary actuator in encouraging plantations of eucalyptus to meet the pulp industry's needs. Even though its practices regarding plantations were guided by a productivist vision of the *monte*, ICONA also played a role in shaping Spanish society's perception of nature through its policies and informative campaigns regarding certain pillars of Spanish fauna and the role society and forestry guards have in preserving this nature.

ICONA's framing of the protective role played by forestry guards is echoed in an article written by De Mesanza de Salas, an agricultural engineer also writing in 1978, who warns against peasants setting fire to the forests. He points to the alienation that has occurred between peasants and their land over the past century and rather than opting for authoritarian forestry guards positioned against citizens he points to the success of cooperation with citizens. By making people aware of the economic benefits of the forests (pine in the case he illustrates), forest fires are said to be avoided. In addition, he proposes training local people as forestry guards and to provide them with work framed around the culture of their patrimony (*patrimonia*). The civilizing mission that such engineers embarked on assumed unknowledgeable, indeed unruly publics whose perceived alienation from the *monte* could be salvaged through education and economic valuation.

4.3.1 Organizing knowledge and society to value the monte

Forestry engineers also acknowledged the role of the *monte* beyond the yielding of direct economic benefits towards the generation of positive externalities and the provisioning of ecosystem services. The community is said to receive benefits they do not need to pay for, like "pure air, clean water, and certain open spaces" (Barrientos, 1978). The role of the *monte* thus becomes manifold, with productive

[8] "estudiando los paisajes sobresalientes y preparando pik-nic, o zonas recreativas y rutas para facilitar la estancia de los seres humanos en los montes. Es decir esta preparando la masa arborea para la entrada de la masa humana. Hay que hacer notar que la preparacion de la masa humana, para entrar en la masa arborea, costará mucho tiempo, muchos disgustos, y muchos daños al monte." (Martinez, 1978)

interests also emphasized, encouraging the planting of fast-growing species so that the deficit of timber supply could be filled, in addition to the needs from the pulp industry. In order to meet the restoration, productivity, and ecosystem service potential of the *monte*, Barrientos (1978) suggests the following three instruments:

1. The creation of a national institute to concern itself with the *monte*'s protective, productive, and recreational functions. This national institute should also concern itself with the industrial uses of the timber so that the needs of nature and industry can be balanced.

2. Based on the past success of the Public Utility *monte*, this area should be amplified by 5 million hectares.

3. The public must be conscientized to valorize and respect the *monte*. The Spanish countryside must be educated to appreciate nature's resources.

These recommendation resonate with what Heinrich Cotta, the founder of modern forestry and pioneer of the concept of sustainable forest management, had already prescribed back in 1817 in his *Anweisung zum Waldbau* (Instructions on Silviculture). As was seen in the *Looking back* period, Spanish engineers were sent to Germany to learn from Cotta and subsequently opened the forestry academy in Spain. In the *Looking back period*, forestry was organized in pursuit of the imaginary of *forestry for the restoration of nature* and Cotta had argued for the need for a national institute to promote scientific management of forests to ensure sustainability, which he operationalized as continued extraction from forests over long future periods. He had married social, ecological, and economic objectives into his conceptualization of sustainable forestry, and in this most recent period it seems that the imaginary of *forestry for sustainable development* took up his initial vision while mobilizing actors, technologies, and material that had become prominent through the past imaginary of *forestry for productive prosperity.* In this sense, the material constructed in pursuit of this productivist imaginary was carried forth into this more recent period, yet the role such material played for national prosperity now served the imaginary of sustainable development.

In order to engage with how these engineers' thoughts are integrated into and reflect forestry policy the political changes of the Spanish State during this period, particularly after the death of Franco, need to be touched upon.

4.3.2 Delegating decision-making power to autonomous communities

After Franco's death in 1975, Spain began its transition to a democracy and in 1978 the Spanish Constitution decentralized policy- and law-making to the 18 autonomous regions that make up Spain. The role of the national government in this new institutional arrangement became a guiding role, where it would set visions and general plans to guide Autonomous regions' plans, with an eye to international agreements especially concerning climate and biodiversity agreements in addition to rural development. The following diagram from Alcanda Vergara & Ortuño Perez (2006) shows the national forestry program as divided into three National instruments, namely the national Forestry Strategy (which materializes as the Spanish Forestry Plan), the Basic Laws of the *montes*, and complementary instruments of the National Forestry Council and fiscal law. The national visions guide the Autonomous Communities' Forestry Plans and Laws.

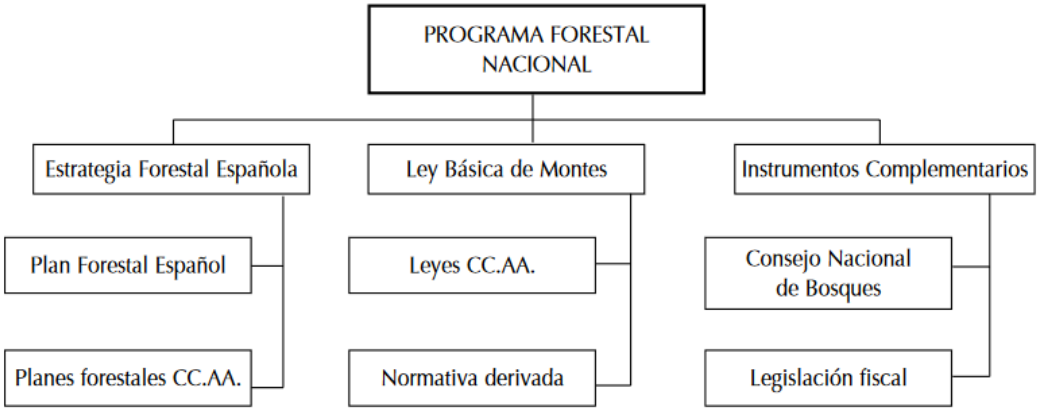

Figure 1: Forestry Policy and Legislation in Spain, from Alcanda Vergara & Ortuño Perez (2006)

As shown in the diagram, the Spanish Forestry Strategy (*Estrategia Forestal Española*) shapes the Spanish Forestry Plan (*Plan Forestal Español*) which in turn seeks to guide the Autonomous Communities' Forestry Plans (*Planes forestales CC. AA.*).

Situating Galician forestry within national and international visions of forestry

The integration of Spain into the European Union in 1985 meant a certain sort of supranational homogenization occurred with regard to forestry policy. In Europe the Common Agricultural Policy (CAP), implemented after World War II, encouraged the intensifying of agricultural production through technological development, significantly changing rural landscapes and economies through Europe (Agnoletti & Santoro, 2015). Since Spain joined the EU a few decades after the CAP had been implemented, based on a vision of prosperity through modernization, scale-enlargement, and industrial growth, its rural economies were different from those countries that had been affected by the CAP earlier. During the 1990s, the repercussions of the production-oriented CAP were felt throughout Europe, specifically with the excess of dairy products. In 1984 the CAP was reformed with a milk quota and policies to stimulate agrotourism and agroforestry as alternative income streams for rural populations. As this reform coincided with Spain joining the EU, Galician farmers did not have the opportunity to modernize in accordance with this EU trend and Galician milk products became uncompetitive. Indeed, across Spain, dry-farmed land decreased by a quarter in the ten years between 1989 and 1999 (Serra et al., 2008). The 1992 McSharry CAP reforms shifted attention towards the environment, basing its strategies on what Agnoletti & Santoro (2015) call the 'degradation paradigm' which sought to restore a state of naturalness to the environment through protecting natural habitats, renaturalization, and planting new forests. Curiously, the trees planted in Galicia tended to be fast-growing species as these enjoyed a quicker return on investment since EU subsidies did not discriminate between fast and slow growing species. Indeed, Cidrás & González-Hidalgo (2022) show that from 1973 to 2009 the area of Eucalyptus plantation increased from 27,963 hectares to 387,983 hectares and Marey-Pérez & Rodríguez-Vicente (2009) show that between 1993 and 1997, 75% of afforested area in the province of Lugo was with fast-growing species.

The imaginary of restoring nature guided the creation of EU-wide policies encouraging the massive planting of trees, with rural communities positioned as the agents of change encouraged through subsidy schemes. However, the way this vision and the policies it shaped materialized in practice in

Galicia through the planting of monoculture fast-growing species contradicts the sustainability principles set out by forestry science. The vision of sustainability through restoration resonates with the first period in this analysis of Spanish forestry, yet its implementation diverged in the way rural populations are positioned in achieving this vision, in addition to the harmonization of environmental and economic welfare made possible through centralized forestry science.

The way *looking around* in this third period differs from the collaboration between Italian and Spanish fascist engineers during the Franco dictatorship is that these national comparisons no longer served national prosperity. Rather, *looking around* after integration into the European Union meant forestry practices in Galicia and Spain became dictated by supranational interests and intersecting imaginaries of good forestry.

4.3.3 Looking around beyond the forest

Sustainable forestry management in the Spanish forestry plans reflect the European trend towards forest management based on the 'degradation paradigm' which positions humans as the agent depleting the ideal state of naturalness and biodiversity (Agnoletti & Santoro, 2015), resonating with the present analysis of the making of forests in Galicia and Spain. The Law of Montes (*Ley Básica de Montes*), approved in 2003 to replace the law from 1957, was oriented particularly to sustainable forestry. This law responds particularly to globalization and the new environmental paradigm brought about by this orientation, setting out a national vision concerning the *monte* (Gobierno de España, 2003). The law (2003, last updated in 2022) states its purpose to be restoration, improvement, and rational use of forests[9] and makes explicit reference to the importance of land-use planning. Its most important new feature is said to be the establishment of Forest Resource Management Plans (*Planes de Ordenación de los Recursos Forestales*) which integrate forestry planning into the larger framework of territorial planning. Abandoned agricultural land, urban land, and 'urbanizable' land are taken into account when planning forests which is framed increasingly as serving a 'social function'. This social function is reflected by ecosystem services whose importance is further emphasized by this law. Determining ecosystem services implies particular knowledge, science, and techniques of gathering and processing data made possible through international cooperation and funding for research and development. Article 33.4 of the law specifies that sustainable forestry plans require instruments directed and supervised by professionals with a university degree and must fit into the Forest Resource Management Plan.

[9] "Es el objeto de esta ley constituirse en un instrumento eficaz para garantizar la conservación de los montes españoles, así como promover su restauración, mejora y racional aprovechamiento apoyándose en la indispensable solidaridad colectiva. La ley se inspira en unos principios que vienen enmarcados en el concepto primero y fundamental de la gestión forestal sostenible. A partir de él se pueden deducir los demás: la multifuncionalidad, la integración de la planificación forestal en la ordenación del territorio, la
cohesión territorial y subsidiariedad, el fomento de las producciones forestales y del desarrollo rural, la conservación de la biodiversidad forestal, la integración de la política forestal en los objetivos ambientales internacionales, la cooperación entre las Administraciones y la obligada participación de todos los agentes sociales y económicos interesados en la toma de decisiones sobre el medio forestal" (BOE, 2003) https://www.boe.es/buscar/act.php?id=BOE-A-2003-21339

4.3.4 Looking around to harmonize forestry with other objectives

The 2003 *Ley Básica de Montes* in article 55 points particularly to the 2011 Spanish Strategy of Science and Technology to incorporate the needs of public forestry and the needs of productive sectors into their development of forestry instruments. Such connections between forests and productive sectors echo developments from the *Looking Forward* period where modelling and future predictions shaped interventions into the *monte* to assure supply of forestry goods. Forestry research aims for the better use of all available resources, for the interchange of information, the constitution of thematic national and international networks, and finally the creation and maintenance of a harmonized database. These aims guide the tools developed by forestry research which is then transferred to public and private parties managing the *montes*. This knowledge transfer implies an accepted vertical hierarchy when it comes to dictating priorities, developing tools to achieve these priorities, and the actors who will carry out these priorities.

4.3.5 Leveraging international and national discourse

As shown in Figure 1, the institutions shaping forestry practices in the *monte* are diverse and exist on multiple levels. The Galician Forestry Plan (Plan Forestal de Galicia – PFG) is the materialization of the imaginary of *forestry for sustainable development* in relation to international and national discourses of what is important for good forestry. The imaginary links together past techniques of planning with international discourse on sustainable development to shape practices accordingly.

In 1992 the autonomic government of Galicia created its forestry plan (*Plan Forestal de Galicia – PFG*) which set out forestry objectives for the next forty years. The plan sought mainly to rationalize and increase forestry production through private investment while reducing the risk of fire. In 2003, the *Ley 43/2003 de Montes* came into effect on a national level, dedicating attention to territorial planning and the role of forestry planning within cross-sectoral plans.

The Galician law modeled on the national 2003 *Ley Básica de Montes* came into effect in 2012. The *monte* is spoken of as the necessary base for the transition towards modern society with especially forests playing a vital role in this development, with forestry being the primary use of the *monte* in industrial society. Today 45% of Spanish timber production comes from Galicia and the introductory text to the law emphasizes the importance of territorial planning in putting a brake on systematic abandonment of farms in Galicia through the development of industrial forestry and agriculture to avoid depopulation and halt the demographic crisis that is said to hold rural Galicia in its grip (BOE, p. 63275). The emphasis on the environmental and climate agreements mentioned in the national law previously described are complemented by considerations of economic development and the need to establish collaborations between the sectors implied in production, transformation, and commercialization of forestry resources to consolidate the “forest-industry chain” (p. 63282) as a way to solve the problems of rural Galicia.

4.3.6 Strengthening forest-industry chain to legitimize private actors in the future of forestry

Before elaborating what the forest-industry chain implies, the ‘ordering of forestry resources’ (p. 63307), as mentioned in this law is worth touching upon. Forests are planned for conservation, improving and protecting forest resources, sustainable returns, and maximizing profit. And not unimportant, this planning is done by experts endowed with the necessary skills. If a *monte* is more than 25 hectares, it needs to be subject to a technical plan made by forestry experts. These plans are

then validated by public forestry engineers who are spread across the 19 forestry districts that make up Galicia (interview with public servant of the Xunta de Galicia, 2024).

The forest-industry chain that seeks to be facilitated by public policy, with forestry experts planning the layout of the *monte* ensuring particular forest masses for the future playing a role in the stability of this scheme. During the *looking around* period, the industrial players that are foregrounded change from public to private ownership. ENCE, for example, the cellulose factory located in Pontevedra (Galicia), Huelva (Andalucía), and Navia (Asturias), became partly privatized in 1990 (49%), and entirely privatized in 2001. The changes towards completely privatizing industries within the *monte*-forestry complex allowed for a purely growth-oriented approach to crystallize. As ENCE, for example, was privatized it became more integrated into international flows of capital, opted for corporate simplification, set up research and development networks for more efficient processing of forestry products into cellulose and biomass into energy – all in the trend of (green) growth competitiveness (Boutureira López, 2014). Yet ENCE, when it comes to ownership and management of the *monte*, does not opt for the active ownership but rather, through the historical sedimentation of the industrial complex around the processing of eucalyptus can count on a steady supply of material with private owners having little alternatives to ENCE.

Article 99 of the *Ley Básica de Montes* concretizes the ends served by forestry management by emphasizing the investment into the '*monte*-industry chain' which concerns forestry owners, forestry, forestry research, those providing forestry materials for production, forestry services, management and execution, commercialization, and the first transformation which includes sawing, pulp, and cork. The State expresses its dedication to strengthening the *monte*-industry chain by facilitating links between industry and forestry and research centers to facilitate the transfer of technology and modernization to improve production, transformation, and commercialization. Additionally, the ends served by research and training are also said to harmonize into protecting forests while simultaneously developing the forestry sector. This balance, or symbiosis between productivity and conservation is said to be able to be achieved through the development of adequate knowledge and technology through forestry science and cooperating with private companies for the effective carrying out of these best practices. This vision of achieving wellbeing through a certain way of managing the *monte* expressed in the *Ley de Montes* of 2012 has further translated into the 2020 Plan Forestal de Galicia or the Forestry Plan which shapes forestry policy from 2020 until 2040.

4.3.7 Translating forestry vision into a plan: the Plan Forestal de Galicia

The Plan Forestal de Galicia (PFG) is a 4.9 billion euro plan setting out objectives, measures, and investments to meet these objectives for the next twenty years. The UN Sustainable Development Goals are used as a guidance for the regional objectives to match a global plan for development and sustainability. The harmony between economic growth and environmental wellbeing is emphasized, as on page 16 where the PFG states that "it is necessary to reconcile the environmental value with the socioeconomic interest of forests, so that they can play their role as suppliers of raw materials from renewable natural resources" (Xunta de Galicia, 2021, p. 16). Environmental and economic prosperity are intertwined in the plan's twinned focus on developing the bioeconomy and its embrace of ecosystem services.

4.3.8 Looking around to greening the economy

The PFG makes repeated references to the bioeconomy, as a reality to be pursued by adequately managing forest resources. However, as a burgeoning field of scholarship on the bioeconomy has shown; what the bioeconomy is and should be is highly contested (Vogelpohl & Töller, 2021). The term is used by governments and corporations around the world to refer to a 'sustainable' economy, comprising a 'set of economic activities relating to the invention, development, production and use of biological products and processes' (OECD, 2009). Achieving a bioeconomy is positioned as a clear objective which will solve societal problems through technological innovation, economic efficiency, societal participation and ecological sustainability (Doezema & Hurlbut, 2017). Yet the imaginations of nature inherent to visions of the bioeconomy are analyzed by scholars as economizing and commercializing it, reinforcing technocratic and growth-centered logics (Birch, 2018).

The narrative that resounds in the Galician Forestry Plan is what Vivien et al. (2019) call Type III: A Biomass-based Bioeconomy, also advocated for by the European Commission. This narrative perpetrates a belief in the ability to replace unsustainable materials (e.g. fossil fuels) with sustainable materials (biomass) to ultimately keep growing the, now green, economy. The *monte* is considered as a source of available biomass to draw from for economic growth, with the European Commission considering the following sectors as generating this resource base: agriculture, forestry, fishing, biotechnology, energy, and chemistry. The Galician Forestry Plan is the main instrument shaping the way forestry is carried out in Galicia, and its dedication to economic growth through a bioeconomy discourse is a way to promise social and ecological prosperity. Writing about the forestry sector and the bioeconomy in Galicia, the Voz de Galicia (most circulated newspaper in Galicia) foresees that "Galicia can be at the forefront of this next industrial revolution, which will lead to intelligent long-term growth" (La Voz de Galicia, 2019).

4.3.9 Valuing the monte's services in economic terms

"That which is free is not valued," says a representative of the forestry department of the Xunta de Galicia to me during an interview. While 80% of forestry subsidies are directed towards productivity, a second development within the forestry department of the Xunta, in line with national and international tendencies, is towards the subsidizing sustainability measures like fomenting ecosystem services. The reasons for developing ecosystem service measurement and payment schemes are situated within a logic of cultivating care for the *monte* by establishing its economic value. According to the Xunta (and various other actors), the services provided by the *monte* are not valued by society and in order to make its value visible, and to make people willing to pay for it, the economic value of the *monte*'s services must first be shown. Services like purifying and storing water, providing clean air to humans, and storing carbon in tree masses are some of the ways in which the *monte* is said to take care of society, and in order for this work to be recognized it needs to be financially compensated.

4.3.10 Protecting the monte requires economic valuation

Almost fifty years have passed since the agricultural engineer De Mesanza de Salas wrote about the need to make people aware of the economic benefits of the forest in order to protect the forest from fire. Today this logic resounds in State institutional discourse where the recognition of the *monte*'s value through ecosystem service calculations is firstly used to argue for the recognition of this value and secondly carried forward to ascribe norms on how to manage the *monte*. The combatting of fires is still central to State discourse, with forest fires being a serious problem in Galicia. The way forest fires are

analyzed and subsequently used to propose solutions fit within the turn to accepting and promoting ecosystem service payment schemes and the turn towards a biobased economy. The law guiding forest practices in the *monte* is the 2007 *Ley de prevención y defensa contra los incendios forestales de Galicia* (Xunta de Galicia, 2007), which sets out a number of objectives and measures to prevent fires in Galicia. The development of biomass collection in *montes* to prevent them from burning and the simultaneous development of the bio-based economy is a win-win solution to protecting the *monte* and society from future fires and achieving rural development.

4.3.11 Active management thanks to economic value

The logic guiding the Spanish state discourse holds that the active management of the *monte* is the only way to prevent the onset of forest fires, and active management encompasses a specific configuration of actors. In the context of the bio-based economy, the forestry plan highlights the importance of strengthening the monte-industry chain. Additionally, the 2007 law on fire prevention and suppression encourages collaboration between municipalities and regional and national governments in biomass collection and treatment. In addition to valuation of physical products that can be extracted from the *monte*, the shift towards valuing ecosystem services is seen by State actors as the solution to forest fires derived from an unmanaged *monte*.

According to the State forestry department, protected natural areas burn five times more than non-protected areas (interview Xunta, 2024) strengthening ever more the call for an actively managed *monte*. The protagonists in the quest for an actively managed *monte* are local companies with adequate forestry knowledge, guided by subsidy schemes. The State's presence in the *monte* is, as opposed to previous periods, kept to a minimum.

In line with tendencies within neoliberalisation of nature, the market and private interests are seen as the most efficient and effective actors to work in the *monte*. Through subsidy schemes and public-private collaborations in addition to research and development projects to foment forestry knowledge, the State's presence in the *monte* seeks to be reduced to merely setting the scene for these actors to operate. The regional government has thirty forestry engineers stationed across the 11 forestry districts that make up Galicia, and these engineers are in charge of checking the forestry practices carried out by forest owners, communities, and companies. Additionally, the forestry plans and interventions into the *monte* are evaluated by these agents. The active management encouraged by the economic valuation of biomass and ecosystem services implies a role for private companies.

Private companies are imagined as active agents in the quest for sustainable forestry and a prosperous future without fires. These actors are said to be more efficient and effective in forest interventions than state actors (Odón Lopez from Xunta de Galicia at Montes de Vigo conference, 2024) and protagonists in the compensation of ecosystem services. The insertion of private companies through payments for ecosystem services seeks to alleviate the financial burden commons communities are under and provide a way for private businesses to lessen their environmental footprint. Within this way of environmental governance, the *monte* becomes a balancing factor for private businesses' striving for economic growth whose funding goes to small, medium, and large enterprises carrying out the work in the *monte*. This new configuration of actors is also said to tackle the issue of the disconnection between people and the *monte* where people are no longer needed to be incentivized to care for the *monte* as economic valuation allows for private entities to do so. The turn away from governing nature

through the dedication of certain areas to human-lessness has dissolved in the current period, where the integration of humans (certain humans) in the *monte* is preferred.

In addition to active forestry management of the *monte* by forestry workers, the ownership of the *monte* also figures into the imaginary of sustainable development tied to *looking around*. The way subsidies from the EU Common Agricultural Policy and Spanish and Galician state departments favor large landowners stands in contrast to the Galician reality, where *minifundismo* characterizes the organization of rural land. State actors, forestry companies, foundations, and scholars (e.g. Beiras (1967) alike refer to *minifundismo* as the main obstacle in the way to prosperity in Galicia. Historically this way of dividing land into small patches served subsistence agriculture with each house having access to small areas of lands located in distinct sites around the homestead fit for different types of cultivation. Yet through economic, demographic, and social changes, subsistence agriculture lost footing and the small patches became ever smaller over time as inheritance practices in Galicia consist of land being divided over all children who then become owners of an even smaller patch of land. Today this situation motivates State interventions and programs which seek to group together landowners to form associations which can then let land to forestry companies who can actively manage the now larger plots of land. Through grouping together patches of land, economies of scale are achieved and machinery, roads, plantations, and other components of the industrial forestry system become economically feasible. Additionally, these small pieces of land are often abandoned and become infested with invasive species like eucalyptus which are extremely flammable, and thus through active management the risk of lethal fires is said to be avoided.

4.3.12 Looking around the community: benefit expands

In addition to the planning of forests and the determining of its social function through establishing ecosystem services, the recipients of benefits from this type of forestry are said to go beyond local communities. Particularly, an increasingly urban population is said to be able to benefit from nature's gifts provided by these forests, in addition to their serving international agreements on reducing climate change and conserving biodiversity which point to the global consequences of local practices. Where four decades earlier forestry engineers spoke about local communities reaping the gifts of the forest without paying for them, this law (Xunta de Galicia, 2003) locates the community further away with access to the forest through centrally-produced scientific knowledge with the law specifically mentioning the need for standardized information to keep citizens up-to-date about the situation of Spanish forests.

Whereas methodologies to know the forests are centrally produced in accordance to international statutes and priorities, the responsibility to carry out 'sustainable forestry management' is placed on the owners of *montes*. The forestry law from 2003 seeks to assist forest owners by implementing projects of ordering *montes*, forestry plans and technical plans[10]. Additionally, referring to forest fires the document stresses the important role played by society in preventing fires and the corresponding need to educate the public.

[10] "Son los propietarios de los montes los que primero y más directamente se responsabilizan de su gestión sostenible. Para garantizar tal gestión, la ley pretende el impulso decidido de la ordenación de montes, a través de instrumentos para la gestión como los proyectos de ordenación de montes, planes dasocráticos, planes técnicos o figuras equivalentes, siendo éste uno de los elementos clave de la nueva legislación" https://www.boe.es/buscar/act.php?id=BOE-A-2003-21339

The scope served by forestry planning has expanded significantly, with benefits from forestry framed beyond local communities. Particularly, an increasingly urban population is said to be able to benefit from nature's gifts provided by forests, in addition to their serving international agreements on climate change and biodiversity (Xunta de Galicia, 2021). Where four decades earlier forestry engineers spoke about local communities reaping the gifts of the forest without paying for them, institutionalized views of forestry now locate the (urban) community further away with access to the forest through centrally-produced scientific knowledge. In this sense communities are still said to reap the benefits from the forests, yet now benefits are framed as supporting human life (particularly in cities) and can be quantified so that actors can be mobilized to pay for them. Additionally, an increasingly urban society is said to require communication and education on the environmental, social, and economic importance of the *monte*.

Institutional discourse positioning an urban society benefitting from forestry management echoes that of forestry scientists. In a recent article (2024) published in *Bosques e Innovación*, forestry management in the 21st century is said to be guided by ecosystem services (Zaragoza et al., 2024). 'Society demands forestry management to have a holistic focus, and that it mitigates the effects of climate change, increases biodiversity, optimizes social benefits, and avoids potential costs and risks' (p. 34, own translation). The forest they describe is organized for production, with production going beyond solely wood, instead oriented to the needs of society - imagined as made up of a certain subsection of consumers of products and services. Production is planned through advances in forestry science and according to authors like Zaragoza et al. (2024), such planning needs to take into account the way society is changing so that future resources are not compromised. This way of approaching forests as something manageable *for* society resonates with other forestry scientists writing in recent times. Muñoz (2018), for example, writes in an opinion piece that the human being has converted itself into an 'animal of asphalt' (*animal del asfalto*) with associated loss of connection to nature, thus strengthening the call for peri-urban forests (p. 36). The intangible value of forests in the *looking around* period comes to require, increasingly, an urban population in function of whose needs this value is positioned. Forestry scientists increasingly and predominantly write about peri-urban forests in the contour of ecosystem service provision (e.g. Magre, 2018; Moreno, 2020; Guerrero, 2023). By 2040, the Galician forestry plan envisions 60% of peri-urban *montes* to have ecosystem services certified through any internationally recognized certification scheme (Xunta de Galicia, 2021).

4.3.13 Conclusion

In this final period, forestry has come to serve the sociotechnical imaginary of *sustainable development* which contains traces of both forestry for *restoring nature* and the productivism that became normalized in pursuit of the imaginary of *forestry for a productive prosperity*. The Xunta de Galicia, the government of the Galician autonomous region, advocates for Galicia becoming frontrunner in green industry, through the production of biobased products and biomass for renewable energy. Additionally, and in parallel, scientists together with forestry companies, engineers, and local government officials are launching pioneer projects to explore the benefits of ecosystem service payments for the *monte*, imagining such markets to both create the necessary income for communities that manage the *monte* and to warrant interest in pursuing adequate management. In this sense, communities are still positioned as having to be educated and directed through State policy, yet as opposed to prior interventions which displaced communities directly from their lands, now communities are

approached as unconcerned and uncaring about the *monte*, with financial valuation of the *monte*'s services put forth as a solution to cultivate necessary care.

4.4 Conclusion: interacting imaginaries over time

The way sociotechnical imaginaries interact over time, the way they evolve, contest each other, and reinvent themselves has received little attention within scholarship, with Jasanoff & Kim (2015) noting this lack in their *Dreamscapes of Modernity*. This chapter has sought to make a considerable contribution to existing scholarship on sociotechnical imaginaries by considering how imagined forms of social life and social order (Jasanoff et al., 2007) contingent on the development of forestry for a more prosperous future evolve over time and are, indeed, contingent on one another. The following table summarizes the preceding narration of the different sociotechnical imaginaries and the way the direction in which vision is oriented, the actors considered visionaries capable of perceiving such visions, their technologies, the way land ought to be owned, and finally the way the public is imagined and interacted with. In this concluding section I will reflect upon these contingencies by considering on the one hand visionaries and their technologies and on the other hand the way the public and land are mobilized in pursuit of the interacting sociotechnical imaginaries.

	Forestry for the restoration of nature	*Forestry for productive prosperity*	*Forestry for sustainable development*
Landholder	State	State	Private
Ways of knowing the *monte*	Cartography Ecological characteristics	Production cycles Planning for productivity	Remote sensing Modelling Economic valuation
Understanding of life in *monte*	Diverse nonhuman community Pure nature Balanced productivism	Standardized Extractivist Productive nature	Functional diversity Optimizable Multifunctional nature
Public (social life)	Destructors Unknowledgeable	Incapable	Uninterested
Interaction with public	Exclude and educate	Modernize or emigrate	Incentivize economically

Table 1: Institutional STIs over time

4.4.1 Visionaries and their technologies

Forestry over the three periods from the 1850s until now has sought to serve differing imaginaries of social order and prosperity achievable through and conducive of good forestry. The way visionaries, or those actors endowed with the capacity to see, have employed different techniques of seeing oriented toward differing horizons has also brought different forests into being.

The first imaginary of restoring a lost nature implied a backward oriented vision, one where forestry scientists were able to conceive of a nature lost to greedy, ignorant rural populations (simultaneously driven by the privatization of lands). Through scientific forestry, consisting of German forestry prescripts mapped onto Spanish imagined realities, the forest became something to be known through rational methods and to be forecasted into the future. The forest in this period was known through

empirical methods, with forestry scientists visiting forests and comparing their sensations to an imagined state of desired nature. Subsequently, while the imaginary of *forestry for the restoration of nature* is backward looking, the techniques to bring about a lost past entails planning the future and contained palpable traces of the creation of a unified nation. Empirical observations were extracted and made abstractable to factor into territorial maps which in the *looking back* period could serve to consider areas that required *protection*, e.g. of high ecological importance, and in the *looking forward* period allowed planning for productivity. During the *looking around* period, where forestry has become oriented towards more than intangible capital – like ecosystem services – the way the forests are known through mapping has also gained more complexity. While cartography in the first two periods imposed unity and homogeneity onto the State's forests, in this most recent period, technologies to know the forest have become more complex with geoinformation systems and remote sensing making the forest into more than extractable timber. The forest in the *looking around* period becomes known in diverse ways and thus takes on different forms; e.g. carbon absorption capacity, recreational value, or potential for the production of bio-energy. These technologies also bring in a new group of actors, namely economists, to weigh in on how forests are imagined. The mechanized results of quantification (Demeritt, 2001), which once facilitated standardized and homogenized representations of forests, have evolved into more diverse forms of knowledge production. These newer methods do away with the oversimplifications of previous periods by extending measurement beyond traditional physical capital, incorporating previously unmeasured domains such as social value, human health, and climate change mitigation capacity. These approaches to knowing the forest elude to diversity, and potentially open avenues for communities to contest and engage with the processes of knowledge creation, yet the overarching logic purported by these newer, more complex technologies remains managerial and economistic, furthermore simplifying diverse processes under the maxim of diversity. The development of ecosystem service payment schemes, for example, is recognized to be flawed in accounting for the full diversity of services provided by forests, yet its proponents harbor hope of said technology one day reflecting the 'reality' of the forest, so that said forest can be made completely knowable and thus completely manageable. In this sense, in the *looking around* period the forest has become exploitable on a more diverse array of fronts, and the actors endowed with the skills to knowing these fronts have become a more complex network of actors and technologies.

Given the way technologies are adapted to and reinterpreted in light of changing imaginaries, the most recent development in diversifying the outputs that the forest is made manageable for raises questions regarding how such technologies will evolve. The mapping that was developed during the *looking back* period, where engineers learned from their German counterparts and translated knowledge and physical technologies to knowing Spanish forests, was mobilized in the *looking forward* period to planning the forests of the future, recall Franco's 100 year forestry plan created in 1941, and also linked to emerging industrial clusters, indeed allowing such clusters to develop. As noted in this chapter, industrial actors were promised forestry outputs that their industry could count on – creating a sense of security for said actors and creating a path dependency today's forestry practices in the *monte* are still conditioned by. Carrying such considerations further, the way technologies are shaped and reshaped by evolving values, cultural assumptions, and political priorities embedded in sociotechnical imaginaries (Jasanoff, 2015; Jasanoff & Kim, 2009) begs the question what future trajectories are contained within the technologies developed during the *looking around* period. Will standardized models be developed to calculate intangible economic value of forests and prescribe ways to maximize said economic value? How will local communities interact with the network of private and public actors

mobilizing behind an ever more complex (but also standardized) way of knowing the *monte*'s value? As forestry continues to integrate diverse valuation methods, it remains to be seen whether these shifts will open space for contestation or reinforce dominant economic and technocratic paradigms.

4.4.2 Producing appropriate publics

The networks of actors mobilized in pursuit of a dominant sociotechnical imaginary are actively constructed in function of and in need of the interventions into the social and natural world prescribed by said dominant imaginaries and accompanying knowledge practices. During the *looking back* period, various reasons like economic growth and land disentailment (or the privatization of land) are cited as having caused large-scale deforestation across Spain (Iriarte Goñi, 2017; Torrón, 2012; Vadell et al., 2016; Valbuena et al., 2010), yet the production and reproduction of social identities in pursuit of the imaginary of *forestry for the restoration of nature* framed rural communities as inefficient and destructive. The way desired land-ownership fed into this imaginary saw centralized control as necessarily strengthened, with the State – guided by knowledgeable scientists – as the trustworthy owner of such lands, in addition to private actors, especially at the beginning of this period. Rural communities were framed as inept, unknowledgeable, and sensational. Forestry, on the other hand, was imagined as a serious endeavor, one that local communities had no ability to engage with. The exclusion and concomitant process of educating a public appropriate for the State's reforestation mission was carried forward to the *looking forward* period, where the imaginary of *forestry for productive prosperity* continued the exclusion of rural communities from their lands, under the heavier hand of the Franco dictatorship. The motto of 'modernize or emigrate' shaped the interactions with rural actors during this period, bringing about noticeable material changes in the Galician landscape with Seijo (2007) estimating that between 1951 and 1991, 800,000 rural dwellers emigrated to urban areas in Spain, northern Europe, and Latin America.

The succeeding period, where economists are brought in to *look around* at the multidimensional value created by forestry management, interacts with this rural reality by seeking to revive active communities to partake in the quest for attaining a desirable future through forestry. Social actors are conceptualized as indifferent to the *monte*, with both rural residents and urban populations who utilize peri-urban forests being perceived as insufficiently engaged with the management of the *monte*. To stimulate interest, both in retaining rural populations and encouraging urban dwellers to take greater responsibility for peri-urban forests, proponents during the *looking around* period advocate for methods that highlight the economic value of forestry as a means to foster care and stewardship. Rural abandonment and depopulation are identified as key issues by State forestry actors, who view sustainable and productive forestry as essential to incentivizing individuals to remain in rural areas. By promoting industrial clusters and mechanisms such as ecosystem service payments, the State envisions forestry in the *monte* as a potentially lucrative activity that can provide rural communities with viable livelihood opportunities.

According to State actors, rural exodus can be mitigated by the development of economic opportunities derived from the exploitation of the *monte*, with rural residents being encouraged to stay in or return to rural areas as active economic agents. The necessity for a rural presence is framed primarily in terms of fire prevention, with unmanaged *montes* being seen as a fire risk, and adequate management being tied to economic incentives. Thus, whereas earlier periods characterized the rural countryside as an area in need of absence – due to the perception of rural communities as uninformed and incapable – the current discourse has shifted towards a vision of *wished-for presence*, wherein

rural actors are now envisioned as economic agents contributing to the management and sustainability of the landscape. And importantly, the *wished-for presence* of rural populations comes with an economic logic and private parties able to respond to this economic logic. The symbiosis imagined between forestry companies, local communities, and industrial actors processing biomass from the forests reserves a seemingly active role for said communities, with the space for action being contingent on the historical sedimentation of infrastructures that guide communities' decision-making.

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As set out at the in the literature review in Chapter 2, I have sought to lay bare how social actors are both socially constructed and in-construction, rather than pre-existing a-political actors on whom policy and interventions are applied. Just like Birch's (2021) warning that the characterization of nature as the antithesis to markets "naturalizes the idea that our biophysical world is the starting condition on which we end up acting" (Birch, 2021, p. 51) so have I expanded on the idea that the social world is made in pursuit of a dominant imaginary. While this chapter effectively sets the stage for understanding how institutional actors have historically worked together to define a desirable future through forestry and the expertise associated with it, it notably overlooks how social actors have contested, negotiated, opposed, adapted to, and reacted to the production of this knowledge. In this sense, this chapter resonates with studies in neoliberal natures and governmentality, which demonstrate how individuals and groups are shaped to align with political, environmental, and economic rationalities (Agrawal, 2005; Foucault, 1991) but does little to provide insights into how social actors contest and reshape their subjectification. Following Jasanoff (2015), imaginaries of prosperity through forestry enter into assemblages of materiality, meaning, and morality of social life rather than encountering a sort of homogenous landscape in which they can disseminate monochromatically. As such, in the next chapters I continue in a co-productionist manner, to examine how knowledge about the *monte* and imagined social order co-evolve in different community contexts, rather than framing communities as merely responding to overpowering forces exerted by powerful (institutional) actors.

5. Commons communities

> *"The Galician people, spread across the territory, are deeply connected to and identified with their land. A people who understand that the land and the monte, the water and the sun, the sea and the beaches are sources of life and freedom – where their ancestors found sustenance and where their children will have to seek it as well. For this reason, they must be defended at all costs."* (Portela, 1979, p. 12, own translation)

Chapter 4 showed how the pursuit of institutional imaginaries of forestry mobilized a diverse range of actors and aimed to shape a society aligned with diverse goals in accordance to said imaginaries, yet analyzing these processes solely through the perspective of institutional actors overlooks and marginalizes the role of local communities in the shaping and materialization of said (and counter) imaginaries. In this chapter, I contend with the previous historical analysis by recounting communities' experiences, practices, and discourses during the three periods outlined in Chapter 4. Drawing on a diverse range of materials, like newspaper articles, scholarly articles, and books, complemented by qualitative methods like interviews and case studies, I offer a glimpse into how institutional imaginaries were and are negotiated and reinterpreted by local communities in the Galician *monte*.

5.1 1840s to 1940s: localized resistance

As elaborated upon in Chapter 4, the first period of State interventions into Galician forests followed liberal reforms that sought to make land-management more efficient and economically profitable. Particularly common lands and lands pertaining to the church were turned over to private ownership through the *Desamortización* of Mendizábal (1836) and Madoz (1855) laws (land disentailment laws). In essence, the Ministry of Finance (Ministeria de Hacienda) sought to individualize ownership, aligning liberal ideology with pressing financial needs, while the Ministry of Development (*Ministerio de Fomento*) aimed to bring all 'public lands' untouched by privatization under the supervision of its engineers (Sayar et al., 1997). The imposition of public utility lands in the 1830s – but theoretically starting in 1812 (Rego & López, 1992) was tied to the concomitant process of municipalization across Spain, where villages were grouped together into new *ayuntamientos* or municipal councils. And while in other Spanish regions, said *ayuntamientos* continued historical trends and simply grouped towns into larger institutionalized municipalities, in Galicia this process did not occur as smoothly. The main obstacle to the State taking over common lands through the creation of municipal councils has to do with the make-up of Galicia's countryside, where the 313 municipalities created were to gather almost 32,000 so-called population entities, or small villages, which represented 50% of existing small villages existing in Spain (Rego & López, 1992) into municipalities. The physical fragmentation of these villages divided across the Galician countryside meant their grouping together made administrative sense to the State, but was unworkable in practice.

Rural resistance against interventions into common lands responded to this dissonance between the State's view of how land should be organized, and the local realities which stood in contrast to such visions. In this sense, the process of selling off lands as envisioned by the land disentailment laws required *montes* to be mapped, and the 1859 General Classification maps of Spain's *montes* is an adequate proof of the State's inability to get a grip on Galician territorial realities, where only 305,000 hectares of *monte* were registered while it is estimated that 2 million hectares of *monte* exist in Galicia (Rego & López, 1992). In this sense, the deep social embeddedness of the *monte* in Galician rural lives

mentioned earlier is also reflected in the geographic make-up of the Galician territory which made the privatization of the *monte* more difficult. Additionally, the Galician *monte* is steep, rocky, and infertile – characteristics that collective use of the *monte* had integrated into management systems like *rozas* (intermittent cultivation) but more difficult for private ownership of the *monte* to grapple with. The Galician *monte* was an intricate part to household economies (Bouhier, 1979) which furthermore shaped the Galician territory in a way distinctive from other territories in Spain, making rural resistance against the State both necessary and more effective.

Before elaborating on the way negotiations with the State intervening in common lands manifested, two important causes for conflict between the State and rural populations are recognized by Sayar et al (1997) to have fueled rural resistance against the State. Firstly, during the second half of the 19th century a new tax system was introduced which placed a particularly heavy burden on Galician peasants. While under the previous system, taxes were paid in-kind as parts of the harvest or livestock to the church, nobility, and the crown, under the new system introduced in 1845 taxes were to be paid to State entities in the form of cash. This shift to cash payments was a particular burden on rural populations who had trouble accessing monetary resources and were used to a more flexible tax system which took into account the level of the harvest. Furthermore, cash payments did away with many forms of fraud previously used by rural communities and fueled a new resistance against the State. This resistance took the shape of protests and riots, or violent methods like in Valdeorras in 1894 where a private grain storage was set on fire as a form of protest against unfair taxation and land redistribution that undermined rural communities' traditional land rights (Velasco Souto, 1995). The second reason recognized by Sayar et al (1997) as aggravating conflict between the State and rural communities was the establishment of mandatory military service, with the 1837 military recruitment law introducing a lottery system that determined who would serve, later refined by the 1856 Army Replacement Law (see also Balboa López, 1991). Although the system was officially universal, wealthier individuals could avoid service by paying a fee or hiring a substitute. In contrast, poorer citizens had no choice but to serve or find alternative ways to evade conscription. Two alternatives existed for those unable to pay a fee or hire a substitute; emigration or self-mutilation. This led to large exodus, particular to South America through Portugal, and self-mutilation practices that consisted mainly of cutting off fingers, an eye, or the Achilles tendon to make men unfit for service (Sayar et al., 1997). Rodríguez Galdo (1995) estimates 1 million Galicians to have emigrated between 1860 and 1960. The resistance strategies of emigration and self-mutilation had significant social consequences, particularly in rural Galicia, where they disrupted the lottery system, forcing other young men to serve in place of deserters. The high percentage of absentees (often exceeding 50-60%) created tensions within communities, leading to denunciations among neighbors. Sayar et al (1997) theorize that this distrust contributed to the rise of individualism, undermining long-standing communal structures in Galician rural society.

Rural resistance in these times against the State's usurpation of common lands, both through privatization and the conversion to public utility lands to be managed by the State (guided by forestry engineers), needs to be understood alongside aforementioned social struggles that shaped rural livelihoods. In addition to previously mentioned resistance strategies to the State, concerning the appropriation of common lands, various incongruencies gave rise to the State's inability to succeed in its mission. As mentioned earlier, the Galician territory's ruggedness and the isolation of small villages from each other resulted in difficulties grouping common lands together into large unities. Additionally, the quantity of forestry workers assigned to areas of land was very low, with Alvarez (2014) calculating that a forestry worker in León, a neighboring region, had to 'watch' 50,000 hectares of forest in 1880,

which was practically impossible. Peasants continued to make use of common lands like they always had (Jiménez Blanco, 2002) which can be considered a form of everyday resistance.

Historically, the *monte* played an integral part in Galician household economies, as demonstrated by Bouhier's (1979) foundational work on the historical geography of Galicia and the interactions between the State and rural communities. In the *monte*, rural communities mainly grazed their animals, collected firewood and timber, foraged for berries and other plants, went hunting. Additionally, it was a source of essential resources like fertilizers to cultivate fields near the homestead, and provided additional space for the growing of grains. Firstly, the collective harvesting of *toxo* (wild gorse) was an important activity undertaken in the *monte*, where this nitrogen-fixing leguminous plant was harvested, transported to the homestead where it was used as bedding for animals, and subsequently – mixed with manure – used to fertilize the croplands. This activity was indispensable to households' ability to cultivate crops, as Galicia's soil is known as being low in nutrients. The second activity, that of grain production, also took place in the *monte* through the *rozas* or *estivadas* system; a traditional slash-and-burn method of intermittent cropping (Correa, 2023). This practice entailed each household being responsible for a plot in the *monte*, where they would cut and burn existing vegetation, till the soil to mix it with ashes which served as fertilizer, and then cultivate it for one year for grain growing. After a year, the land would be returned to communal use as grazing land and each household would be assigned a new plot – effectively creating a system of land-rotation that was collectively agreed upon (Ana et al., 2012).

In Tenorio's (1914) ethnographic work undertaken from 1900 to 1906 and published in 1914, he shows how land distribution took place in the spring, where the village council came together and appointed two experienced villagers to divide the land into as many parcels as there are residents, and then assigned them by lottery. The lottery would be conducted by placing slips of paper with villagers' names in one set and parcel numbers in another; a young child would draw the papers from a jar, and each villager received the parcel assigned to them. Anyone who did not wish to use their parcel could transfer it to someone else in exchange for labor.

The continued use of common lands was tied to the collective way of life that continued to characterize rural areas in Galicia. Tenorio's (1914) account of communally threshing grain is an example illustrating this dynamic:

> "The threshing work is done in turns (*a xeira*) in almost all villages; the neighbors thresh the grain together, taking turns, making the task a true celebration, especially when women help. The threshing begins with what they call *estrar las pallas*, which means spreading the bundles of rye on the threshing floor so that all the ears of grain remain on top. Then comes the actual threshing: the men position themselves in two rows, half on one side and half on the other, armed with flails, and beat the rye. They thresh in rhythm—while all the flails on one side strike the straw at the same time, those on the other side are in the air. When the first round, called *decrúa*, is completed, the threshers call out to the women: *mulleres á eira! mulleres á eira!* The women arrive and, while the men rest and take a drink, they turn over the straw. Once they finish, the *bina* or second round begins, now threshing in the opposite direction of the *decrúa*." (Tenorio, 1914, own translation)

Collective practices in the *monte* were carried forth during this period where the State steered land management policies to favor private property or public forests inspired by the view that land-use by communities was destructive and harmful. Sayar et al (1997) point out how the State's interest of land-ownership for desirable forestry was not simply opposable to community use, but rentiers (those receiving an income from the land used communally) and livestock traders – as two other social groups – also united to defend common land uses. The conflict extended beyond rural communities versus the state, as villagers mobilized using both legal (court appeals, collective purchases) and illegal (tearing down fences, ignoring forestry plans) tactics. The widespread boycott of land auctions and forestry regulations ensured that most sales failed, as altering collective land use threatened the agrarian system's foundations. Local governments also resisted state intervention, refusing to enforce laws that undermined community autonomy. Sayar et al (1997) recount a testimony by sales commissioner in the province of Ourense in 1889:

> "The mayors of the towns, in general, deny the commissioner the assistance they are obliged to provide, and some replied that they would never comply with the orders of this commission..." (Sayar et al, 1997, p. 179).

In this sense, negotiation of State-led interventions into common lands was motivated by necessity and rural custom, with rural communities' interests in maintaining commons resounding with local powerful actors who received income from common land use.

Finally, at the start of the 20th century, until the Spanish 'Civil' war, Sayar et al (1997) identifies another type of resistance, namely the formation of agrarian associations and rural organizations, providing rural populations with channels for grievances, rapid spread of information, and enforced collective sanctions and boycotts. This collective resistance took an anti-feudal form and played out primarily through legal disputes, with tenants obstructing property assessments and payment collections as a means of rejecting the legitimacy of feudal rents. Collective resistance involved both legal actions and social pressure, including threats, public shaming, and sabotage (e.g., mutilating livestock, cutting vines, burning haystacks). These measures deterred landowners from collecting rents and discouraged individuals from acting as free riders. In 1919, the so-called no-pay strategy was adopted which meant the collapse of the feudal rent system and the transformation of farmers into small landowners. Sayar et al (1997) shares the example of the rent refusal in the parish of Sampaio de Ventosela where landowners struggled to enforce payments due to collective resistance, with judicial officials refusing to intervene for fear of community retaliation. These forms of resistance were put to an end after Francisco Franco took power in 1939, where rural collective organizations were destroyed and the State became more coercive and repressive in the pursuit of its interests.

5.2 1940s to 1980s: opposing oppression

While in the previous period, negotiating the State's imaginary of desirable common lands and rural populations took on various and variating shapes, in the current period negotiation with the State becomes more defensive as the State becomes a more organized, violent actor seeking to appropriate common lands. Access to historical documents and information through interviews enabled me to gather more data to substantiate the way communities negotiated the State's imaginary of good forestry and a desirable *monte*, leading me to organize this section into four distinct, yet overlapping moments namely *everyday resistance, mobilization and protest*, and *larger social movement and legal resistance* – categories that emerged from the data. While academic engagement with historical forms

of resistance that took place during the Franco dictatorship is often made difficult by the fact that archival data was systematically destroyed during this period, various academic sources on the subject do exist. In this chapter I use existing historical studies complemented with empirical material gathered through participatory research methods, interviews, and archival data.

5.2.1 Everyday acts of resistance

The perseverance of traditional practices

On Saturday the 29th of April 2025 at a conference by the Mancomunidade of Cotobade – which groups together the commons communities of the region – the invited speaker (a professor of biology from a Galician university) was invited to speak about the multiple uses of the Galician *monte*. These uses span mushrooms, grazing animals, and chestnuts – to name a few. With regard to chestnuts, the biology professor talked about so-called *soutos*; groups of chestnut trees that were historically cultivated for rural communities' subsistence, especially before the introduction of the potato in the 16th century. Chestnuts cultivated in the *soutos* were, for centuries, subject to intensive pruning and care so that wood and chestnut production was optimized. What is considered as important cultural heritage (e.g. Álvarez-Álvarez et al., 2018; Gaspar Bernárdez Villegas et al., 2021) can also, according to the biology professor and presumably an array of actors subscribing to the same logics, be seen as an obstacle to (green) productive forestry today. Commenting on the cultivation of *soutos* the professor referred to the lack of synchrony in production by chestnuts grown in *soutos* as an obstacle to the adequate developing of the chestnut industry; *soutos* namely contain different varieties of chestnut (*castanea sativa*) that differ in the texture and size of fruits produced, and more importantly for food security historically, produce fruits during different times of the year – so that risks of bad harvests or other problems were mitigated. Today this diversity is seen as prejudicial to the cultivation of chestnuts, as industry favors uniformity, standardization, and predictability as cornerstones of the industrial system's functioning, standing in sheer contrast to traditional forestry practices (Scott, 1998). By turning to practices that are considered antagonistic to desirable forestry, in this way, following Foucault we may "bring to light power relations, locate their position, and find out their point of application and the methods used" (Foucault, 1982, p. 780).

A prominent forestry engineer, who retired in 2010s after 40 years of working in the realm of forestry in Galicia became intrigued by the *soutos* way of cultivating chestnuts. In the 1970s she was working on introducing the fast-growing North American species Douglas fir (*Pseudotsuga menziesii*) into the Galician *monte*, when upon various field visits she came across *soutos*, particularly remembering her trips to the regions of Fonsagrada and Valdeorras. While her work was situated within the frame of productive forestry, the meeting of these different, diversified, ancient growing techniques was so intriguing that she started to collect samples and build a database of germplasm of different chestnut varieties. In this sense, the growing of chestnuts in so-called *soutos* can be read as a type of resistance against industrial forestry plantations that imposed homogeny onto the *monte* to ensure controllability, in addition to having transformative effects within formal scientific circles. The engineer in question dropped the line of investigation that had brought her to Fonsagrada and Valdeorras, in addition to other regions, to dedicate herself completely to the studying of *soutos* and the rich diversity of chestnut trees that populate Galicia. Through European and national funding she was able to set up a research group that worked together with local communities to gather samples of chestnut trees, building a rich database and investigating ways to ensure the flourishing of these trees. Yet when she retired in 2022, the chestnut genetics project did not carry forth, as the researchers who had been working on the

project do not hold permanent positions, a problem this engineer ascribes to lack of stability ensured to researchers by the Xunta (local government) (interview March 7, 2025).

Other continued ways of using the *monte* depended on the value of the *monte* to the State forestry services. In Mourente, a parish on the outskirts of the city of Pontevedra, for example, the commons *monte* is relatively small (43 hectares) compared to more rural counterparts so that the interactions between neighbors and State (forestry) agents was different. During the Franco dictatorship, neighbors from Mourente continued to make use of the *monte*, by taking their cows to graze, by collecting various materials to feed their livestock (most houses in this parish had one cow or a pig) like gorse, grass, acorns, and oak sap, collecting hardwood, and other materials. When referring to the activities neighbors undertook in the *monte*, commoners refer to their 'cleaning' of the *monte* and that this 'cleaning' was of interest to the State. Cleaning the *monte* is a phenomenon that may sound strange to those coming from different geographical, cultural backgrounds, but refers to the removing of biomass especially from the ground to control plant growth and also to counteract the spread of fires. Commoners conceive of their everyday actions in the *monte* as cleaning the *monte*, thus also providing the State a service. In more rural *montes*, like Froxán (a village in the parish of Lousame), the State took over the commons completely (100 hectares) to turn into monoculture plantations of pine and eucalyptus, complicating the pursuit of continued community use.

Resistance through intentional presence

In addition to continuing traditional uses in the commons, local communities also engaged in practices of resistance or negotiation with the State over how the *monte* should be used through seemingly subtle, yet intentional ways of being present spatially. The dynamics during this time period saw the State officially negating the existence of common lands, with their ownership going to town councils and their uses being devoted mainly to plantation forestry. Within this context, local elites are considered to have taken advantage of their closeness to the regime and people in power to actively appropriate areas of common lands. The appropriation of common lands took on two forms; firstly, community members designate parts of the common lands as privately owned so that these lands would not be usurped by the State (a type of direct resistance) and secondly, wealthy or powerful individuals would take advantage of their political position to usurp common lands for private use. This latter dynamic occurred in Mourente, a parish on the outskirts of the city of Pontevedra, where a retired military man who had built a house on common lands was looking to appropriate more of the community's common lands. In order to resist this appropriation, commoners got together to devise a strategy to send a clear message concerning the communal nature of this land. They decided to organize weekly football matches, of married people against singles and in this way signaled the communal nature of these lands. In Rebordelo, a more rural parish a little farther away from Pontevedra, which spans 400 hectares land appropriation occurred at the hands of various individuals, including a forestry engineer who also built a house on the commons, in order to halt more land appropriation the local priest moved the stone cross (*crucero*) to delineate the land that was considered of the church (in a way appropriating this land) yet ensuring its use to continue being communal.

5.2.2 Mobilizations and collective protest

Mazaricos, A Coruña, 1963

Paula Bergantiños (1998) recounts the experience of the community in San Fins de Eirón in Mazaricos, in the province of A Coruña, where on the 22nd of January 1963, the community stood up against the State's interests of afforesting their *monte*. She shares the account of Anton Paris, an inhabitant of the parish who recounts what happened in the *monte* that day. He recounts it was the third time the forestry engineers tried to get machines into the *monte* to plant eucalyptus, this time they were accompanied by the police (*guardia civil*). The neighbors went up the *monte* to where the plantation was being planned, the majority of whom women, and they argued against the plantation. The *guardia civil* fired their guns, injuring four people, one of whom, Jose Esperante Paris or better known as Che de Pedro, who died from his injuries on the way to the hospital in Santiago – a journey that took until the next morning. After the guns had gone off, the *Guardia Civil* took to the streets to ask whoever they ran into whether that person had been to the *monte*, and if the answer was yes, they were put in jail for twenty days. Four people remained in jail for six months, one of whom being a woman the age of 60. The State ceased the community's lands, but never imposed the plantations it had set out to.

Hio, Cangas, Pontevedra

In the historical account *Hio; memoria e estatutos de montes veciñais*, a text written for and provided to all commoners to remember the collective history of their *monte*, Rosa Cabada Alvarez recounts the parish's history. The community struggle against land appropriation in Hio, this seaside parish in the municipality of Cangas in the province of Pontevedra, goes back to 1942 when private businesses collected sand from the shores of the parish. The removal of sand made fishing, an activity the local community depended on, impossible and the community responded through violence until achieving their objective of halting the extraction of sand from their shores. Concerning the common *monte*, the community's struggle against appropriation started in the late 1970s when the community petitioned for their recognition as rightful owners of their common lands, which was confirmed by the town council in 1977. Nevertheless, private parties still came to the *monte*, along with cartographers to draw separations between their private property and common lands – in the process appropriating more common land. 300 people are recorded as having gone to the *monte* to make the cartographer's work impossible and provide the written records as proof of what was considered common lands. Other acts of resistance the community undertook were opposing the town council's plan to make a camping on the common lands by the sea and the halting of the clear-cutting of trees that was intended to be done without previous consultation with the commoners. In 1978 the community began the process of legally recognizing the commons, a process finalized in 1979, and in 1980 a directive board was selected to lead further bureaucratic and governance processes. After achieving legal recognition of the commons, the community representatives met with ICONA's forestry engineer with particular demands for further collaboration. Some of these being: being informed on the situation of the consortium between the community and ICONA (the State's forestry services) and that the pine trees that are auctioned off are supervised by the community members and a forestry technician. Through official, legal recognition of the community as rightful owners of common lands, further communal works and services were facilitated to be undertaken in the future. The improvement of roads, reparations of washing areas, fountains, and so on were done with money made from the plantations, and it became increasingly clear to the community that money made from the *monte* would be used to improve the *monte* and the local community.

O Grove, Pontevedra

In Balea, a village in the parish of O Grove, located by the beautiful seaside in Pontevedra, a series of events and resistances occurred against appropriation of the community's common lands, as recounted by Carmen in *O monte é noso* (1979). In 1971, a man living nearby arrived to the village and started to mark and close off parts of the *monte*, including a piece of land that contained a drinking place for the villagers' cattle. The community collected 207 signatures within the parish and went directly to court to oppose the land appropriation. From this moment, more and more men arrived to the seaside village; from Ourense, Pontevedra, the Netherlands, and other places – attracted by the touristic potential of O Grove. The majority of the community's seaside lands were appropriated by these men, while the villagers wrote to the authorities, filing denounces, and asking the *guardia civil* for help. All calls for help and forms of protest were ignored. The account given in *O monte é noso* (1979) recounts the most serious appropriation, where a Catalan man referred to as señor Alayo began to construct an urbanization (still existing today) named Balea Marítima on the community's common lands. These lands were common lands, and had not been appropriated by the State nor afforested like most commons in Galicia had. The village had divided parts of their common lands between the community members, leaving the land by the seaside as commons where people could go with their cattle or collect wood and the like. Alayo bought 9 private parcels from villagers and appropriated 14 parcels that were considered commons, and started to construct luxury chalets for tourists. The new mayor of the town was sympathetic to Alayo's interests, and the community's protests went unheard, like that on the 3rd of December 1977 when the *guardia civil* had to come to physically protect Alayo. The men and women from the village yelled at the guards, who ended up admitting that the villagers were in their right and that Alayo was acting illigally, yet the *guardia civil* is then quoted as having said "we need to obey the Government's orders. Look you can break all you want, but get it over quickly so we can get out of here". The local judge of Cambados ruled in favor of the villagers and promised to stop Alayo's constructions, a promise subsequently not kept. So the neighbors decided to go to the chalets by night and destroyed the walls and doors of two chalets. The next day the judge sent for eight people to be detained, five of whom were sent to jail with no explanation nor process. They were released after a month, again with no explanation nor process.

Malvas, Tui, Pontevedra

Raimundo Martínez Rodríguez (1979) recounts his experience of the State's afforestation project in the parish of Malvas in the municipality of Tui. He remembers the parish to have been full of livestock, with the village constituting 125 people who estimate their having 450 heads of cattle and 2,300 goats and sheep. When the State forestry workers arrived to the village, they took 90% of the commons *monte* land left the community with the remaining 10% for grazing their livestock. Whenever community members would step foot in the monoculture pine plantations, where there was still some grass growing as the plantations tended to be implemented on better soil, they would be fined by the forestry guards stationed there to 'protect' the plantation from the community. Martínez (1979) recalls the injustice in fining villagers for grazing their cattle in the plantations while the horses roaming around the *monte* were not considered a problem by the forestry guards, Martínez (1979) ascribes this discrepancy to the horses being owned by wealthy individuals with connections to State officials and also the premise of said horses attracting tourism – an economic activity valorized by the State (as opposed to community land-use). In 1968, the forestry guard, acting in compliance with the PFE's orders (State forestry organism), announced the afforestation the remaining 10% of the commons

monte. He promised the local community this afforestation would be done with pine and that a road would be freed up for the community to use. These promises were not kept, the afforestation was done with eucalyptus and the road that was promised took a form that was of little use to the villagers. While before the eucalyptus plantation, the village had used 8 mills powered by water, now the amount of functioning mills fell to three due to the lack of water – eucalyptus plantations require a significant amount of water to be used. Furthermore, the amount of livestock that had remained was also done away with and agriculture was made much more difficult for villagers due to the lack of water.

5.2.3 Social movement and legal resistance

In 1973, the 'Autopista del Atlántico' was initiated, a highway of 219 kilometers, connecting the larger cities of Galicia from the northern city of Ferrol with the southern border between Galicia and Portugal. The project required an investment of 1.4 billion euros and was carried out by *Autopistas del Atlántico, C.E.S.A.* (AUDASA) which gathered together 16 parties consisting of institutional saving funds (e.g. Municipal Savings Bank of Vigo, Provincial Savings Bank of Pontevedra) and banks (e.g. Bank of Bilbao, Bank of the Northwest, Atlantic Bank, etc.). The largescale destruction the project would imply for local communities, it was estimated that at least 300,000 people would be affected, their means of subsistence (impossibility of their accessing their lands, destruction of waterways), and the direct destruction of homes without relocating inhabitants were some of the few motivations for the mobilization of local communities against the project. In 1978, the platform against the *Autopista del Atlántic*o was born, and within this group the *Coordenadora de Montes Comunais* was created to be fully dedicated to resisting the highway project through the recognition of land rights of local communities. This subgroup focused on struggles around the devolution of the *monte* to communities, fires, indiscriminate clear cutting of plantations without communities' consent, and for the development of research about what best to plant in communities' lands.

Figure 2: Autopista del Atlántico (AP9) – (Audasa, n.d.)

The methods undertaken by the *Coordenadora* group took on various forms, like direct resistance against clearcutting, campaigns against fire and general information campaigns aired on the radio, newspapers, and other media, research and gathering of historical records, and community-building through gatherings like for example in 1978 when the book *O Monte é Noso* was published with a same-titled documentary film. Especially this latter media form created an impressive momentum around Galicia, as it was screened in many parishes, showing communities they were not alone in their fights but that that a united movement was building across Galicia. The isolation of *aldeas* was overcome through the screening of this film, which shared personal stories of peasants losing their common lands, not being able to graze their animals, and other hardships endured at the hands of the State. In addition to sharing struggles, the film informed communities of their legal rights, and was a major force in building momentum of further recognition of and demand for commoners' rights.

Regarding legal rights, the growing social movement – organized through the *Coordenadora de Montes Veciñais* and supported by the dissemination of *O Monte é Noso* and other informational campaigns – played a crucial role in raising awareness among local communities. Although the 1968 law initiated the process of returning communal lands (*montes*) to local communities, knowledge of these legal

rights remained limited. This lack of awareness facilitated the continued appropriation of common lands. However, as the social movement expanded and information spread, communities became increasingly aware of both the legal rights they already possessed and those they sought to claim. This rising collective consciousness and mobilization culminated in the passage of the *Lei de Montes Vecinales en Man Común* in 1980, which is widely regarded as the foundational legal recognition of local communities as the legitimate owners of their communal lands.

Those who were active within the *Coordenadora de Montes Comunais* recognize the importance of direct action that complemented the communication campaigns and development of legal rights of communities. During an interview, one of the founding members of the group recounts his participation in the blocking of timber auctions organized by ICONA (the State forestry organism), where together with affected community members he stopped the auction from carrying on and subsequently was arrested and sent to jail. The timber auction they were interrupting took place in 1979, offering wood for sale that had been burned in 1978. These auctions were organized by the State forestry services (ICONA) without the participation of local communities. Despite being directly affected by the fires, local communities were denied the right to partake in price-setting or decisions regarding the sale of burned timber. According to the activist interviewed and others within the movement, burned wood was sold at a significantly lower price than unburned wood, while still meeting the demands of the cellulose industry. It is estimated that burned wood loses approximately 15% of its utility compared to unburned wood. Beyond reducing wood prices, forest fires also caused the vegetation surrounding the trees to be cleared, thus making it easier for companies to cut and extract said remaining trees. Additionally, the person interviewed shared his belief, and experience, about the collaboration between timber companies betting at the auction, making it so that the price at which wood was sold remained artificially low. Thus, arguing for community inclusion and consultation, the *Coordenadora* formally petitioned against the auctions through official channels, which were all ignored. The group, along with 80 inhabitants whose *monte* had been burned, disrupted the auction in 1979. In the end, the neighbors gained the right to decide over the sale of their wood and chose not to sell it at the lower price offered by buyers. They motivated this decision with the idea that such acts would reduce the incentive for the setting on fire of forest, as it showed communities would not budge under pressure.

In 1980, the Spanish law on communal lands, *Lei de Montes Vecinales en Mano Común*[11], was passed that recognized communities as legal owners of their lands and the subsequent decentralization process that occurred with the creation of the Autonomous Regions saw Galicia passing the *Lei de Montes Vecinales en Mano Común*[12] on October 10, 1989, which emphasized the use and decision-making autonomy of commoners in addition to common ownership. These laws recognized the inalienability of these lands, stating they could not be divided, sold, seized, or transferred – ownership was with those living in the community. Peasant protests and the setting on fire of forest plantations, all significantly harmful to the return on forestry for the Administration are considered a significant reason for these laws to have been passed (López Balboa et al., 2004). Indeed, in the 1980s the area of forest in Galicia was less than in 1964, mainly due to fires (idem, 2004). The 1980 and 1989 laws recognized the special nature of these lands, establishing that they were indivisible, inalienable, imprescriptible, and unseizable. Furthermore, they affirmed that ownership of these lands belonged to the local communities that had traditionally used them. After the 1980 law was passed, the

[11] https://www.boe.es/buscar/act.php?id=BOE-A-1980-25463
[12] https://www.boe.es/buscar/doc.php?id=BOE-A-1990-3358

devolution of lands back to communities was set in motion across Galicia, with the *Coordenadora de Montes Comunais* having built a valuable network of actors and knowledge that assisted communities in their processes of regaining ownership of their lands.

5.3 1980s – now: negotiations to maintain commons

Violent struggle, a strong social movement, everyday resistance, and legal recognition shaped communities' interactions with State in the previous period, and in this more recent period techniques of negotiating institutional imaginaries of the *monte* are contingent on the previous period. In this section, I first describe the general functioning of *Montes Veciñais en Mano Común* or commons *montes* as institutionalized through the 1980 and 1989 laws achieved through the previously discussed resistance tactics. I then share conclusions reached through fieldwork which consisted of participatory methods and spanned across various field sites to consider what commoning today consists of and how communities negotiate the institutional imaginary of good forestry through their practices.

5.3.1 Montes Vecinales en Man Común

Today, around 3,000 commons communities (or *Montes Vecinal en Man Común*) in Galicia collectively manage 664,230 hectares of land, of the region's total 2,030,681 hectares (Xunta de Galicia, 2021). Communal use of the *monte* has, for centuries, shaped the Galician landscape and today this type of property is legally recognized – thanks to the struggles in the 1970s to get legal recognition of common ownership of the *monte*. *Montes Vecinal en Man Común* indicate a property type that is so-called private communal, which means the land is owned by the community that inhabits the land and is managed for communal benefit. As opposed to private property regimes, common lands cannot be divided and sold, as they are indivisible, inalienable, imprescriptible, and non-seizable. This means the lands cannot be divided, use-rights cannot be taken away or transferred to another person, ownership cannot be lost to others over time, and the lands cannot be seized to repay debts. These characteristics have made that Galician common lands have enjoyed strong legal rights, with proof of historical communal land-use satisfying its classification as commons today.

While *monte comunal* is also used to indicate commons *montes*, and indeed exist beyond Galicia, the *monte vecinal en mano común* in Galicia are distinct from such other forms as they specifically indicate the communal ownership of the *monte* by the neighborhood (*vecinos*). In other parts of Spain the *monte comunal* or communal *monte* refers to land areas owned by municipalities but *used* as commons. In Galicia, the *monte* is not only *used* as commons but also *owned* as commons. This ownership means that whoever lives in the community, also popularly referred to having a 'house with fire' referring to the active inhabitation of the house, is a commoner and has rights to use and decide over the commons. These rights are lost when the house's chimney is no longer lit – in a metaphorical sense – as when said person no longer lives in the parish. In this way, the rights to be a commoner remain connected to the place, rather than to the person. Today, this characteristics means that when a person moves to a new place, they are eligible to be a commoner if they are registered at the address they live in the parish. The process takes longer than solely registering in the parish, with for example in Mourente, a new commoner needs to attend the annual assembly to be approved by the rest of the community, to then become an official, legal commoner at the following year's assembly. In this sense, the legal incorporation into the commons community takes at least one year. Finally, even though living in the parish makes one eligible to be a formal commoner, in practice only one person per household is able to participate in the community's assemblies. This position tends to be taken up by the male so-

called ‘head’ of the family, (re)producing gender dynamics in decision-making processes about the commons.

The ownership of the *monte*, as we have seen is communal and cannot be sold, traded, or given away. Decision-making, too, is collective and the *Monte Vecinal en Man Común* is championed as the most democratic form of land-management that exists. As established in the *Lei de Montes* in 1989, which still shapes the functioning of commons *montes* today, a yearly assembly must be held where all commoners are present. All important decisions about the community’s lands must be made during such an assembly, which all commoners are expected to attend. Communities have their own rules and guidelines regarding attendance, with Mourente stipulating failure to attend the general assembly without adequate notice as a reason for a person’s status as commoner to be taken away. The general assembly is held once a year but can also be convened if requested by 20% of the commoners or if deemed necessary by the *Xunta Reitora* (the board).

The *Xunta Reitora* (board) is mandatorily made up of a president and at least two additional members (like secretary, treasurer, and other board members (*vocales*)). This group of people comes together more frequently than the general assembly and is tasked with carrying out the needs and wishes of the community decided upon during the general assembly. Types of tasks carried out are very context specific but tend to include working with lawyers on legal matters (like disputes with neighbors regarding land-marks), working with forestry engineers on the forestry plans, supervising forestry companies and workers in their work in the *monte*, and other tasks to ensure adequate management of the *monte*. Finally, the board is re-elected every four years, enabling new members to join. In practice, however, the same people tend to be re-elected and stay active board members. The reason for this is the complexity associated with being part of the board (mainly in terms of knowledge and skill needed to navigate the bureaucracy associated with managing the commons) which is said to make it difficult to find people willing to join the board.

The collectively agreed upon statutes shape how the commons function; how the status of commoner can be achieved and maintained, what is expected from commoners, and how the organization of the commons functions. Additionally, the way money is used is stipulated here too. Legally, the *Monte Vecinal* has to reinvest 40% of its yearly income back ‘into’ the *monte*. This means this money is used for maintaining plantations, clearing roads and paths for the community to use, and other maintenance tasks. The remaining 60% can be decided over by the community, with most communities consulted for this thesis opting for reinvesting the remaining 60% also into the *monte*. In addition to using the money to take care of the *monte*, communities also tend to use the remaining money to take care of the community, by building a communal house for the parish, organizing a commoners’ feast, sponsoring sports and music events, and so on. Some communities choose to divide the remaining 60% of income over the legal commoners, this means that the sale of wood and other sources of income generate financial capital which is then spread over the community’s members or by purchasing materials for all the commoners (e.g. chainsaws) – as a way to pay less taxes as the income divided over the community is subject to substantive taxes.

Finally, commons communities across Galicia do not exist in atomized, separated spaces, but are often organized into so-called *Mancomunidades*. The *Mancomunidade* of Pontevedra, for example, groups together 15 different commons communities, including that of Mourente. This group gathers in assemblies once per year and is oriented both to improving the functioning of commons communities and representing their needs within politics. A more recent dispute, for example, between the

communities and the municipality concerns the municipal property tax, which commons communities are exempt from paying due to their legal status as serving common good rather than private benefit, yet the municipality has continued issuing annual tax bills. After various victories in court by the commons communities against the municipality the situation has not changed, and the *Mancomunidade* seeks to tackle this problem through a conjoined, concerted effort.

5.3.2 Peri-urban commons: Mourente

> "I'll tell you the story about a Rural Affairs Minister here who, back in the '90s, said: "Galicia's rural area has no future; it's a dying body that just needs to be sedated so it can die without pain." And this was the very minister in charge of modernizing and supporting rural communities! How could you say something like that, man? You should have been out of office the next day!" (Manuel, commoner of Mourente)

Located on the outskirts of most Galician cities, forming the transition area from urban to rural areas, are the peri-urban common lands. These lands have been subject to changing uses over the last century as urban growth has changed the make-up of Galician landscapes and are considered important providers of services to an 'increasingly urban population' (Xunta de Galicia, 2020). These services are imagined as including leisure activities like hiking or mountain-biking, foraging, and also the provision of clean air and water. In this section, I elaborate on my fieldwork in the peri-urban commons of Mourente (Pontevedra). Complementing this case study are the *montes* of Salcedo, Tameiga, and Teis, which are other peri-urban commons which I visited during fieldwork and where I held interviews with presidents of these communities. In Mourente, my engagement was more in-depth and it will be used as an illustrative case (Alvesson & Sköldberg, 2000) of peri-urban commons.

The *Monte Vecinal en Man Común* in Mourente counts 172 formal commoners and a *Xunta Directiva*, or board, made up of 12 people. Most commoners are men and above the age of 60, and in the board there are three women and nine men. The commons span 43 hectares, making it substantially smaller than the average commons *monte* in Galicia, which is about 220 hectares. The commons of Mourente is termed a peri-urban commons, as it is located only three kilometers away from the city of Pontevedra. The city of Pontevedra counts just over 80,000 inhabitants, and the growth of the city is able to be recounted by commoners in Mourente, who experienced it first-hand or through their family members. In the following quote, Maria, shares how she feels about the situatedness of Mourente with regard to the city of Pontevedra:

> "In Mourente, I believe that the pride that "this is ours" is still preserved. Besides, we are so close to Pontevedra, we see ourselves so invaded by the city, that it is like "up to here!" I remember my grandfather saying: "At the Provincial Hospital, Mourente begins." Provincial Hospital?! Where does that leave us now? *A tomar por culo*." (Maria, commoner of Mourente)

The encroaching of the urban onto rural areas is felt in Mourente, where many families have lived in the same house or plot of land for decades and recount the encroaching of the urban onto the rural through their experience (and that of their grandparents). While Mourente is changing, with properties being built and sold, people emigrating out of the area towards cities or abroad, the make-up of households still often consists of various generations living together or at least the house being passed down within the same family. This means that elders (people in their 80s) live with their children and

the children of their children either in the same house or in different houses on the same property. In this manner the experience of grandparents is vividly present as members of the family are actively present in each other's lives. The memory of what Mourente and the *monte* used to be is transferred onto younger family members in an active process of collective living and meaning-making which leads to sentiments like that shared by Maria, who feels that Pontevedra has encroached onto Mourente, and what people from Mourente had considered 'theirs'.

The intergenerational closeness between family members shapes commoners' perception of the *monte* and what the *monte* should be, as the following commoner, Ana, also recounts:

> "For me, it is a place that belongs to everyone, one that our ancestors fought for because it was their way of life, and that we can now enjoy and take care of." (Ana, commoner of Mourente)

The awareness of the social struggle engaged in by their grandparents, and sometimes parents, makes the *monte* something commoners imagine protecting and caring for. Indeed the temporality experienced at home is also reflected in the way commoners imagine achieving a better future through particular practices of forestry in the *monte* , as Pablo shares:

> "There is a saying that goes: "The one who plants does not harvest." The trees are for the children and grandchildren. Therefore, the two most important decisions are made in the assembly, because we cannot decide to use this plot of land for one purpose and then, five years later, say that it is better suited for something else." (Pablo, commoner of Mourente)

The temporality inherent to imagining the commons requires governance practices to be undertaken in common, as the future is imagined as inherently collective. In this context, key decisions regarding land use and tree planting are made in community assemblies. In theory, this ensures that agreements are collective and that the land is used consistently and beneficially for what the community deems desirable over time, avoiding arbitrary changes that could compromise sustainability and the long-term goals established by the community.

According to my interlocutors, the management of the commons serves the common good *for the monte*. When asked what the purpose of their engagement with the *monte* is, most people share that they want to *care for* the *monte*, rather than extract benefit from it for their private good. One way in which such care materializes is through Mourente's policy to use left-over financial capital, which is not divided over the community members, to buy more private land to make into commons and thus 'take care of'.

Care for the *monte* is also considered to stem from the generational experience of the *monte*, as illustrated earlier and by Ana, who in the following quote illustrates how she considers the difference between rural and urban people's perception of the *monte* to be:

> "It depends on whether you've lived it or not. If you're from the city center, it's just a place where you can go for a walk – if you go, great, and if not, also fine. But if you lived it, beyond being a place to walk or take care of, it's a memory of how it once was." (Ana, commoner of Mourente)

While, as the quote by Maria at the start of this section demonstrated, people in Mourente live the city's encroaching onto their perish and what previously was considered rural, they also consider the importance of the *monte* for their urban counterparts and consider management of the *monte* to serve the *monte* in addition to the needs of said urban population. Furthermore, Ana's quote eludes to the generational importance of the *monte* as connecting people with each other, where the struggles of previous generations for maintaining the commons factors into imagining the *monte*.

While commoners from Mourente perceive a deep connection to the commons, other values like clean air, clean water, and the *monte* as a recreational space are also frequently mentioned by commoners. The terminology of ecosystem services is used by various commoners to designate the intangible services provided by the *monte* to society, like those illustrated by Jose:

> "We are taking care of the springs, we are the green belt of the cities, producing oxygen and working against city pollution. Besides the ecological and social uses — chestnuts, mushrooms, walking, cycling, all of that —we are the open forests of the cities. And that needs to be compensated, because we need to cut down the dead trees, as they are a source of viruses and fungi. We need to repair the tracks so that people can walk on them. We need money to manage the technical and legal advisory services. So, if we are providing public services that benefit the entire population, then the administrations must collaborate." (Jose, commoner of Mourente)

Scholarship concerning peri-urban commons has identified trends of transforming of commons into recreational sites for urban populations at cost of those dependent on commons for livelihoods (Mundoli et al, 2018) and, similarly, an urban population as 'demanders' and rural population as 'suppliers' with regard to natural resource management in the commons (Weins et al., 2021). The quote by Jose accentuates how urban users and rural 'workers' are imagined in a sense, contingent too on the responsibility commoners imagine the public administration to have in facilitating the commoners in taking care of their *monte* and concomitantly providing ecosystem services to society at large.

The case of Mourente, as illustrated here, resonates with scholarship exploring the negotiations in peri-urban commons (situated predominantly in the Global South) characterized by the trend of urban users and rural caretakers of the commons. Commoners recognize the use of the *monte* by urban people, which they consider acceptable if carried out adequately and with respect for the *monte*. The fact that people come to cycle, run, or walk in the *monte*, gather mushrooms, have picnics, and so on, is not seen as a problem by commoners, yet the lack of knowledge about the commons *monte* as communal property rather than public property is an issue commoners raise during interviews. In this sense, urban people are imagined as lacking knowledge and disinterested in what commoners imagine the 'common good' or best interest of the *monte* to be. The categorization of non-commoners in this manner has led to commoners engaging in practices dedicated to demarcating common lands and 'appropriate' uses like placing signs around the common lands with warnings and general rules.

Non-commoners are imagined as having little knowledge about who is taking care of the *monte* and the costs associated with this care, which is bothersome to commoners, who as a response have adapted the language of ecosystem services to voice the way the *monte* contributes to people's lives and in this way gain recognition of their labor. The adaptation of this language is accompanied with increasingly bureaucratized dynamics of managing the *monte* that commoners need to navigate. Various interviewees shared their frustrations with how the Galician government is increasingly making

the management of the commons an administrative endeavor, as illustrated through the following quote:

> "The Xunta wants to put the Monte Comunal in the market, that we produce for the market, they believe that it is the best way to help establish population in rural areas, we do not … So, now we have more and more administrative pressure, after each assembly you have to send notification of a new list of community members of registrations and cancellations, we have to send I don't know what, we have to send, I don't know how much and such and such.." (Luis, commoner of Mourente)

There exists therefore a sentiment of wanting to care for the *monte* and in extension care for an urban population which is imagined as not being aware of what commons are nor who takes care of them. While providing such services, commoners feel their tasks are made more difficult by the State's administrative and bureaucratic requirements. Which, as a form of knowledge, is also often cited when asked why it is so difficult to find new people to become active in the commons board.

In addition to bureaucratic and administrative costs as challenges to be overcome for commoners, the operations associated with adequately taking care of the *monte* also create high costs for commoners. The institutionalized requirements of working with forestry engineers in planning the *monte* and subsequently carrying out works by engineers and forestry workers implies costs to the community. In the following quote, Elisa illustrates the way expert knowledge is leveraged in managing the *monte*:

> "Yes, before [managing the commons] was done based on what people thought best, but now there are engineers who advise on reforestation, saying things like: "This area is better for these species," or "That area is better depending on soil quality, whether it gets sunlight or not," and other factors that have an influence. Also, there are people who do the planting – we don't plant ourselves; instead, we pay someone to carry out the reforestation. (Elisa, commoner of Mourente)

Change in the commons is imagined as being accompanied by professionalization, where the gathering of *toxo* and other activities in the *monte* by community members has made way for forestry workers (from the local community or from elsewhere). Commoners no longer carry out works in the commons, with the exception of some neighbors who still go to the *monte* to gather firewood, pinecones, and other materials to use in the home. Yet commoners have also not 'exited' the *monte* as a primary reading would insinuate, rather their task has diversified to become supervisory and collaborative with forestry workers and engineers. One commoner, for example, at the start of an interview shared how he did not have much time because he needed to go to the *monte* to supervise the work a company was doing in cutting trees. Supervision in this sense refers to the making sure that cutting is done correctly, no spaces outside the commons are affected (which is difficult as no physical boundaries exist between commons and surrounding private property), and branches and leftovers are cleared out of the commons to minimize the risk of fire. Furthermore, this commoner shared how he would spend time every year pruning trees as he enjoyed the task and decision-making has become a more consultative process between experts and commoners. During an interview with a forestry engineer, he shared the process of working together with communities as mediating both the industry possibilities of trees planted, the desires of the community, and the ecological possibilities of the *monte*. He reflected how a community had wanted to plant sequoias in a particular zone, but this zone

had been ecologically inept for such trees due to the type of soil and based on his advice the community decided against such a plantation.

Forestry engineers readily admit to prescribing forestry plantations based on the timber market, pointing to the lack of infrastructure available to process timber products that are not derived from pine or eucalyptus. The lack of industrial use of other timber products has made communities, together with experts, look for other ways to valorize (financially) the products of the *monte*. With ecosystem services providing a language, as mentioned earlier, that encapsulates the services provided by the *monte*, and potentially opening a door to a future where these services are paid for. Mourente's new tree plantations, for example, planted in 2024, are carbon certified meaning they are considered to actively capture carbon, with these credits able to be sold and traded on the market. This new development fits within Mourente's vision of having a *monte* filled with trees that are not grown to be cut, but rather to stay in the *monte* and in this sense ecosystem service schemes provide commons communities with a way out of the industrial forestry paradigm.

The costs of maintaining and caring for the *monte* are high and are part of the reason why industrial forestry is adopted by the large majority of commons *montes* in Galicia. Yet peri-urban *montes* like Mourente are different from their rural counterparts, with one such reason being historical intervention. While the peri-urban nature of Mourente's commons brings with it dynamics of rural and urban uses, it has a characteristic history with regard to State interventions in pursuit of industrial forestry. Mourente and other peri-urban *montes* were not subject to the State's industrial forestry mission and were therefore not turned into the plantations that shape the Galician countryside. Instead, neighbors living in Mourente could make continued use of the *monte*, as Elisa explains:

> "Of course, they let us [graze animals in the *monte*] because, they thought "Look, I'm not going to clear [the *monte*] myself, it's cheaper if the neighbors do it, and that way I keep them happy." Everyone here in Mourente, in every house, had cows. I remember we were one of the few who didn't because my parents came from another place and my father worked in something else. But I remember that all the neighbors had cows, so they needed to keep the stable clean and dry. So, they would go to the *monte* to collect *toxo* (gorse), all kinds of herbs, anything available—they would cut it, and with the cow dung, they made fertilizer, which was then spread on the land. So, in a way, it was a recycling system." (Elisa, commoner of Mourente)

As Elisa remembers, neighbors living in Mourente continued to graze their animals and gather *toxo*. Such traditional uses were able to continue in the *monte* as the State did not carry out large scale forestation. Yet the State did intervene into peri-urban common lands in other ways. Instead of plantations, peri-urban commons were used for installations associated with urban development. In Tameiga, Vigo, for example an industrial business park was built. In Salcedo, Pontevedra, an army base was built for practice drills and training. And in Mourente, Pontevedra, a public hospital (Montecelo) was built, in addition to a police base, a school (Principe Felipe), and a center for minors.

In Mourente, like in other peri-urban commons, these public facilities were constructed in the 1970s, where the municipal council transferred the land rights to the public administration, legal recognition of common lands was very weak. This transfer of formal land ownership was done without consulting the community and today, thanks to the 1980 and subsequent 1989 laws on common lands, communities are overturning these land transfers and regaining titularity of these common lands. The

two examples that will briefly be illustrated here are that of Principe Felipe and Montecelo in Mourente. Montecelo is a public hospital that was built in 1972 and opened in 1973 after Pontevedra's City Council transferred the land to the Social Security Treasury (*La Tesorería General de la Seguridad Social*) in 1971. The land concerned counts 141,925 square meters and was transferred without the recognition of the lands as commons, as the Franco dictatorship had abolished communal property regimes to bring these lands under the control of municipalities. In 2016, after intense legal battle, Pontevedra's Court declared the land transfer to be null and void due to the impossibility of overriding the so-called immemorial possession argument that affirms the non-appropriability and imprescriptible nature of common lands (as established in the 1980 and 1989 laws). These lands and their uses cannot be divided, sold, alienated, or seized, and if their historical use can be shown its communal nature applies for time immemorial. The ruling was supported by historical documentation, including records from the 1752 Marquis of Ensenada's Land Registry, the 1847 Provincial Land Inventory, and the 1901 Catalogue of Public Utility Forests of Pontevedra, as well as witness testimonies from residents confirming the land's past communal use. The Spanish State appealed the ruling, but the appeal was rejected based on the communal land's inalienable, indivisible, and perpetual nature. Since the ruling, the land on which the hospital is situated is legally considered common land, and the public administration has reached an agreement with the community of Mourente, stating that they will pay the community 23,583 euros annually in rent for an indefinite amount of time. The second ruling, that of Principe Felipe, concerns a similar nullification of the transfer of the land by the City Council of Pontevedra to the Provincial Council who built a children's center on the common lands in 1970. The legal dispute over the land occupied by the Principe Felipe Center in Mourente remains unresolved. In April 2022, the Court of Pontevedra recognized the ownership of this land by the Mourente community, a ruling that was upheld by the Pontevedra Provincial Court in November 2023. Despite these judicial decisions, the Pontevedra Provincial Council has filed an appeal before the Supreme Court, prolonging the legal conflict. Mourente's community is dissatisfied with the Provincial Council's stance as the community wants to find a way to negotiate and reach an accord, rather than more time-consuming and costly legal negotiations. Currently, the case awaits the Supreme Court's decision on whether to admit and rule on the appeal filed by the Pontevedra Provincial Council.

The reverting of historical land-grabbing of the commons is considered a way to regain recognition of commoners' rights to land, derived from immemorial use of these lands and the characteristics that common property implies, namely their inability to be divided, exchanged, transferred, or sold. The recognition of commoners' rights implied by the taking back of land usurped by the State and the financial income guaranteed by said recognition enable Mourente's community to negotiate the State's imaginary of what the *monte* should be towards their own vision of a desirable future. Freed from the industrial forestry paradigm that has hitherto shaped forestry practices, the community desires the planting of autochthonous species like chestnuts, oaks, and birch trees – to name a few – that do not offer financial returns but are imagined to be better for the *monte*. The vision of a desired *monte* is shaped by how its past is imagined, reflecting both its historical state and the way it is remembered through personal and family experience. Yet as commoners have noted throughout this chapter, commoning in the *monte* exists in relation to institutional forces and how these are imagined. Commoners, when asked about the Xunta's forestry plan which spans from 2021 to 2040, unanimously indicated to have little awareness of this plan and little faith in the Xunta's intention with regard to forestry in the *monte*. The following is an extract from an interview with Conchi:

Conchi: I just don't know where that money [from the Galician Forestry Plan] is invested. In fact, being part of the commons community, I've never really thought about it. I know we get a subsidy when pruning and things like that, but it's ridiculous.

Interviewer: What do you mean by "ridiculous"?

Conchi: Like a joke. It's like if I gave you five euros, and you were like, "Girl, what am I supposed to do with these five euros with everything I have to spend or all that I need to do?" I honestly don't know where that money goes. I've never really cared to find out their policy because I know that whatever they say they're going to do, nothing actually gets done. Besides, I can see that they're not really into it.

Interviewer: What do you mean by that?

Conchi: They're not people who are truly involved in the *monte*, so from there, we can expect very little.

Commoners imagine the local government's engagement in the *monte* to serve interests that are contrary to the *monte*'s wellbeing. The way the government tries to make the commons work as a company has created a general feeling of discontent and distrust among commoners. The extract from my interview with Conchi points to a difference in both motivation and knowledge about the *monte* that shape interventions in the *monte*. State institutions are imagined as not actually 'knowing' the *monte* and not being "truly involved in the *monte*", which fuels distrust in such public bodies and a rejection of State forestry policy and intervention.

This difference in ways of knowing the *monte* and deciding upon what to do is also reflected in the following quote by Manuel:

> "Because in the liberal system, the Xunta believes the *monte* should be made more productive. The eternal debate: "You have abandoned the *monte*, and it's not productive enough. You should manage it more professionally to harvest timber and generate profits". And we respond by saying that some *monte* communities do lease their land for eucalyptus plantations and timber harvesting, but we don't want that – because people live here, and they're not just thinking about money. They live here, and they care about other things too. Years ago, we realized that having a eucalyptus tree near your home is bad news – because if it catches fire, your house is at risk. Eucalyptus burns easily. Pine too, though slightly less. And oak? Oak burns as well, but less so, because it retains more moisture. Clearly, economic factors alone don't drive the decisions of the commoners. And that's why the Xunta doesn't like it – they keep putting obstacles in our way and treating us more and more like businesses." (Manuel, commoner of Mourente)

In Mourente, resistance against pressures from the State to make the commons increasingly work as a private company is imagined to grow out of lived experience, where both the honoring of past struggles and also the lived experience in the here and now drives commoners to reject industrial forestry practices. Manuel shares how the risk of fire, and thus the embodied risk of death and destruction, is felt by commoners and motivates their decision for a different type of forestry. And this different type of forestry does not resonate with what commoners imagine to be the intention of the State.

5.4 Conclusion

Historically, local communities have interacted with the State and its associated forestry imaginaries through a range of strategies, including direct protest, legal advocacy, and forms of everyday resistance. These diverse practices have served as mechanisms through which alternative visions for the *monte* have been articulated and pursued, and through which institutional imaginaries have been negotiated. In the present context, communities continue to employ various approaches to realize their visions for the *monte*'s future. The case study of Mourente provides a valuable illustration of how a peri-urban commons community navigates the interplay between institutional imaginaries, collective community aspirations, and the practical and material circumstances afforded by collaboration with forestry engineers and other institutional actors. The following table summarizes the conceptualization and preferred management strategies for the *monte* as articulated by the CMVMC of Mourente, resonating with other peri-urban commons visited during my fieldwork.

	View by commons communities
Landholder	Communities
Ways of knowing the *monte*	Memory Stories Scientific
Understanding of life in *monte*	Trees and *monte* as service provider Belonging to local community
Social life	Local autonomy Antagonistic towards non-commoner public

Table 2: view by CMVMC

6. Destruction as care: a vanguard vision of flourishing in the Galician *monte*

6.1 Introduction

> "It's like the A-team. The A-team would go wherever there was a call for help. A hitman was hired and the problem was solved. Well, the *Brigadas* are the A-Team of the trees and anyone can call us." (Interview, Fabio)

At least once per month, a group of volunteers comes together to destroy eucalyptus and acacia trees in different parts of the Galician *monte*. This group is always made up of different individuals, with certain people frequenting actions or always being present while others join once and are never seen again. The ways acacias and eucalyptus are destroyed depends on a variety of factors, but death is always the objective. As the *brigadista* quoted at the start of this introduction explains by way of analogy to the A-Team, the group engages in violent acts imagined to set free the beings that are unable to flourish on their own, due to what can be compared to organized crime that nobody can defeat alone. While eucalyptus is a sensitive issue in Galicia due to its importance to the economy (Cidrás, 2024) and the presence of acacia is formally recognized as troublesome (it is officially considered invasive) (Martínez-Fernández et al., 2012), the practices that *brigadistas* undertake in the *monte* are anything but mainstream. What then, mobilizes this group to take action while the majority of Galician population does not (in this way)? How do these actors imagine a prosperous *monte*, in service of collective flourishing? What knowledge and knowledge-ways do these actors base their engagement on and how do they interact with institutional imaginaries of what the *monte* should be? Surely, interests are not a fully convincing explanatory force (Jasanoff, 2004) to understanding how such actions arise and materialize (it is not enough to call *brigadistas* middle-upper class, or urban, or ecologically-minded), instead deeper engagement with the social histories of actors, epistemic knowledge-ways, practices, and their messy intertwining – or "prolonged, contested interactions among people, ideas, institutions and material objects" (Jasanoff, 2004, p. 2) – could reveal much more than simple interests-based or categorical analyses.

In this chapter, I lay out the results from my ethnographic, participatory research with the *Brigadas Deseucaliptizadoras*. I follow the vanguard vision of *destruction as care* that guides their interventions into the Galician *monte* by illustrating their practices, objectives, and how they imagine a desirable community for the *monte* attainable through violent destruction. I accentuate and draw attention to the relation between how community is imagined, how knowledge is mobilized, and later on reflect on what this implies for thinking about governance in the *monte*. By neither basing my analysis on prior knowledge claims about how the world is (i.e. the *monte* is under threat by corporate and State control) nor in normative notions about how it should be (i.e. the *monte* should be managed as commons), I sensitize the analysis to the ways in which *is* and *ought* are coproduced by following the *brigadistas*' vanguard vision of *destruction as care*. In this way I take the production of these claims themselves – both the normative and the ontological – as the site of study, as the question and not the answer, conducting this analysis in the idiom of co-production (Jasanoff, 2004b). In a different manner than existing studies I elaborate on how relations – as assemblages of actors – are reconstituted within the vanguard vision of *destruction as care* by investigating the *Brigadistas*' interventions as violent and destructive. And, in order to clarify any confusion, I emphasize that the

point of this work is not to argue that what the *Brigadas* do is destruction, but rather to engage with the imaginaries framework to exhibit the way knowledge about a community of animals, trees, plants, and so on comes with concomitant normative ideas about how this community should be organized and created (through destruction). My work here is not so much concerned with whether *brigadistas*' claims are *true or not*, whether they are *right or wrong*, but instead to trace *how* these actors arrive at their standpoints, what knowledge-ways underlie their practices and visions, how their vision of *destruction as care* gains traction, and how the way they imagine unwanted trees loops back to shape their practices and subjectivities. Such a co-productionist analysis enriches thinking about the politics in the Galician *monte* and also, on a more global level, raises questions about the relation between knowledge, communities, environmental management practices, and the interactions between sociotechnical imaginaries (something that will be engaged with in Chapter 7 *Discussion*).

6.2 Who are the Brigadas Deseucaliptizadoras?

In the wake of a wave of fires that devastated 50,000 hectares of Galician monte in 2017, including 10 hectares of forest in the village of Froxán, the *Brigadas Deseucaliptizadoras* were born. The community of Froxán counts five inhabited houses, stewards of 100 hectares of common lands, the majority of which monoculture plantations of eucalyptus and pine. In order to transform the *monte* they needed more hands than they had within their community. Their mission to regenerate the *monte* into a diverse landscape led to the creation of the communal volunteer program known as the *Brigadas Deseucaliptizadoras*, or the De-eucaliptising Brigades (Cidrás, 2022).

The *Brigadas*' workdays follow the form of traditional communal work that for long shaped rural Galicia, namely a *roga* followed by an *albaroque* (González-Hidalgo et al., 2024). The first term, *roga*, refers to 'call to communal work' and would historically see neighbors coming together to gather *toxo* (nitrogen-rich shrubs) or wood or other material that on one's own is hard to achieve. Here *brigadistas* spend the morning working together in the *monte* for about 4 hours. After the *roga* follows the *albaroque* which is a feast that follows a morning, or day, of communal work. During the *albaroque*, *brigadistas* gather together around tables and enjoy a traditional Galician meal cooked by members of Froxán's community (or whatever community is hosting the action). Later in the day other festivities, like music, theater, or informative talks are held.

The *Brigadas* initiative started in Froxán, with a few dozen volunteers returning to the community's common lands to remove eucalyptus and plant different tree species. As the initiative gained traction, other communities became interested in organizing the same interventions into their common lands, and as such the initiative grew. With institutional support from the NGO Verdegaia, issues around insurance were resolved and the *Brigadas Deseucaliptizadoras* was able to grow into a social movement that now counts more than 1,500 people and more than a hundred interventions in different commons *montes* across Galicia.

Volunteers that take part in the *Brigadas* are varied, yet tend to have enjoyed a superior (formal) education, live in cities, be able-bodied, hold considerable ecological knowledge, take part in independence movements, and feel emotional attachments to the Galician *monte*. Actions tend to count between 20-50 volunteers who come from very different places in Galicia, some driving various hours to get to the *monte* in which the action is planned. As for gender, the often assumed overrepresentation of men as participants of the *brigadas* is false. Actions tend consist of men and women equally, with more complex dynamics regarding the participation of transgender or queer

individuals, which is minimal. As for the division of labor, it can be observed that men tend to be the ones working with chainsaws while women use less intensive methods or tools of destruction. One male *brigadista* even related the joy of using the chainsaw to a "masculine instinct" and the chainsaw itself to a shotgun (interview Fabio). As for age, the diversity of *brigadistas* is extensive; with babies tied to parents' backs while they work, other children running around helping out here and there, teenagers (though this might be the group least present), young adults (between 20-30) and adults between 30-50 being most present, and then older adults participating in smaller numbers. Due to the diversity in practices employed to eradicate unwanted trees, the fitness of *brigadistas* differs, and in order to take part one does not need to be very fit. Those with more difficulties can perform easier tasks or simply work less.

As mentioned earlier, the number of *brigadistas* that are signed up to the initiative counts 1,500 people. These members receive an email every time an action is organized somewhere in Galicia, usually once every week or two weeks. After having participated in more than a dozen actions, certain patterns become evident. Firstly, the make-up of the group depends on the site where the work is undertaken, with some communities counting many members in which case the participants tend to be half *brigadas* and half local community. In Froxán and Lentille, the two main sites chosen for this case study, the community was rather small (about seven) which would be complemented by about 20-30 *brigadistas* from other places. Secondly, the group undertaking actions contains a particular 'core group' of recurrent *brigadistas* who over the years have become friends and for whom the actions are a way to reconnect with each other. This core group consists of about 15 individuals. The people that make up this group have been part of each other's lives and relationships for years, and engage in activism together outside of the *Brigadas* – like demonstrations for environmental causes.

Finally, Froxán and the *Brigadas Deseucaliptizadoras* have figured into a variety of studies concerned with ecosystem restoration through commoning (Laxness, 2025), community conservation (Grove et al., 2020), restoring commons through removal of monocultures (González-Hidalgo et al., 2024), the meaning of invasive alien species (Cidrás & González-Hidalgo, 2022), and community governance against eucalyptus (Cidrás et al., 2018). These papers situate commoning practices, in Froxán and with the *Brigadas*, as regenerative acts and explore the way their practices enable transformation towards more ecologically and socially just governance structures.

6.3 The two field-sites

In Chapter 4, the historical imaginaries that shaped Spain and Galicia's forestry governance were elaborated upon within an institutional realm. Yet imaginaries do not meet a 'blank canvas' on which they disseminate in an expected manner (Jasanoff, 2015), instead they meet and are forced to interact with situated material and meaning. In this section, I shortly explore the way the imaginary of *productive forestry for prosperity* changed the landscapes around two villages that the *Brigadas Deseucaliptizadoras* work with, namely Froxán and Lentille. These villages were chosen for diverse reasons; firstly, they are the oldest and most frequent participating villages of the *Brigadas*, secondly they are frontrunners in working to eradicate eucalyptus and acacia through communal work, and thirdly, my interest in ethical engagement and care-full research led me to opt for working with communities I fostered a personal relationship with, which is crucial to participatory research processes (Smith et al., 2010; Milberg Muñiz et al., 2024).

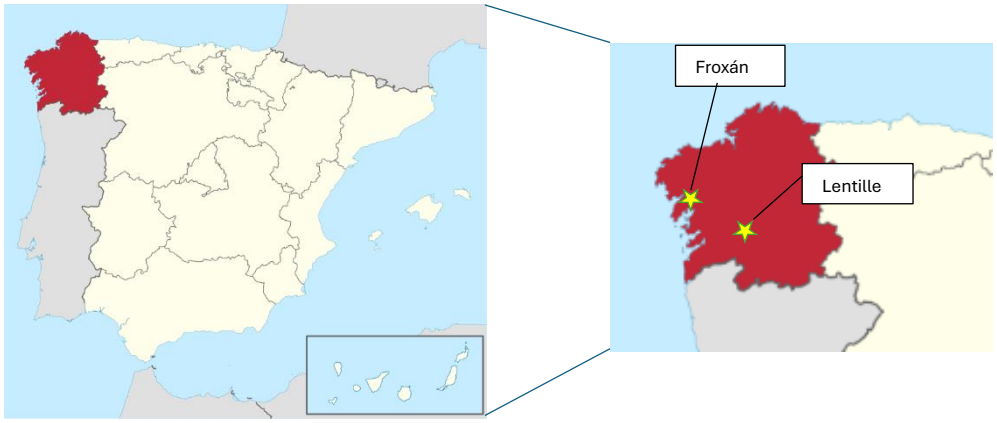

Figure 3: Galicia in Spain (on the left) and field sites in Galicia (on the right), from https://www.mapas.top/espana/mapa-de-galicia/

6.3.1 Field site I: Froxán

In the parish of Lousame, A Coruña province, lies the village of Froxán. The village consists of five inhabited houses and its common lands span 100 hectares, most of which is covered with eucalyptus (Eucalyptus globulus) and pine (Pinus pinaster). During the Franco dictatorship, the village's common lands were taken and brought under state control, to be transformed into monocultural plantations of pine (Pinus pinaster) and eucalyptus (Eucalyptus globulus) to fulfill the State's vision of national prosperity through industrial forestry, particularly to service the pulp industry. After community resistance, the commoners regained the rights to their lands in 1977. However, the State Forestry Corps, or the Patrimonio Forestal del Estado (PFE), still maintained legal rights to manage plantations even if they were owned by communities. In 2002, the community of Froxán formally broke ties with the PFE and gained complete control over their lands (Evans Pim, 2018).

However, the commons that were returned to the community were fundamentally different from what they had been decades earlier, as vast plantations of pine and eucalyptus now spread across the *monte*. Correspondingly, people's relation to these trees also changed; with work in the *monte* changing hands from community members (with grazing animals) to employees and forestry engineers with access to knowledge and technology necessary for the management of large plantations. The plantations of eucalyptus further benefited from two fires that occurred in Froxán in 2006 and in 2016, ravaging large parts of the community's common lands and making way for further spreading of eucalyptus into areas that had previously held other types of vegetation. In light of the danger posed by these fires and the likeliness of their recurrence, the community founded the *Brigadas Deseucaliptizadoras* in 2017, to remove eucalyptus trees from their lands and bring another type of monte into being.

6.3.2 Fieldsite II: Lentille

In the Ourense province and more specifically in the historic O Ribeiro wine region lies the village of Lentille. Winegrowing in O Ribeiro has followed a historical process of intensification and abandonment with the amount of cultivated land shrinking from 6,000 hectares in 1925 to 2,610 ha in 2000 and a historic low of a mere 1,273 ha in 2022. The population of the region also dropped from 51,683 to 36,320 inhabitants between 1960 and 1996 due to migration to cities in Spain and other European and South American countries (Caldas & Otero, 2009). Correspondingly, the number of viticulturists fell from 5,770 to 1,622 between 2000 and 2022.

The developments in Lentille fit within trends of rural depopulation and industrial intensification. In light of emigration and industrialization, many of the vineyards that had historically been labor-intensively cultivated were abandoned. Within these landscapes, one particular tree was able to prosper: *acacia dealbata*. Acacias, historically, shared the landscape with the people of Lentille who grew patches of acacias, with a deep trench dug around each patch of trees to make any rhizomic spreading through the root system impossible, to use young exemplars of the trees as poles to hold up their vines. Yet as processes of modernization came to shape viticultural practices – and particularly, concrete poles became affordable – the use of acacias was reduced and its controlled cultivation was abandoned. Rural depopulation, emigration and industrialization of farming methods left parts of the *monte* without active management by people, so acacia was able to expand even further. Just like eucalyptus that ravages the land around Froxán, acacia too benefited from fire to spread around the village. In 2004, a fire was set at three different points around the village, which cleared away vineyards, pines, chestnuts, oaks and other plants to make way for acacias to spread freely. Today the people living in Lentille engage in a battle to eliminate these trees with the help of the *Brigadas Deseucaliptizadoras*.

6.4 Following the vanguard vision of Destruction as Care

The *Brigadas Deseucaliptizadoras* gather people from across Galicia to work in different *montes* to eradicate unwanted tree species, particularly eucalyptus (*globulus* and *nitens*) and acacia (mainly *longifolia*, *melanoxylon*, *dealbata*), together with local communities. In the following sections I will examine how *destruction as care* is imagined, enacted, and justified by sharing empirical reflections from my fieldwork.

6.4.1 Practices of destruction

There are various ways through which *Brigadistas* destroy unwanted trees in the *monte*. These acts of destruction aim to kill eucalyptus and acacia, and are tailored to context, ability, purpose, and resources. Furthermore, the practices of destruction are experienced in embodied ways which shape how these acts are imagined as care. In this section, I illustrate the practices of destruction employed by *brigadistas* to eradicate eucalyptus and acacia and recount some experiences *brigadistas* shared with me to shed light on the way practices of destruction relate to the construction of eucalyptus and acacia as unwanted and kill-able (Haraway, 2008) enemies.

The first strategy to destroy these trees consists of cutting them down with a chainsaw or handsaw. During sessions with the *Brigadas Deseucaliptizadoras* anyone willing and able to handle a chainsaw is given the chance to do so, though those taking up the task tend to be experienced with the machine. Predominantly male *brigadistas* pick up the chainsaw, put on a protective suit, and subsequently spend a few hours making noise and destroying unwanted trees. Yet these acts of destruction are not random, uncoordinated. They are, instead, subject to planning and group coordination together with local communities who know their land and what trees are a priority to cut down, and in what way. The way decisions are made about cutting down trees with chainsaws is based on criteria of danger and damage, for example the way a tree is expected to fall and potentially damage a desired tree or pose danger to *brigadistas* working around the area. This knowledge comes from experience working with the chainsaw in addition to workshops organized by the *Brigadas* to inform *brigadistas* about the use of this machine.

During a session in Froxán for example, in November 2023, *brigadistas* with chainsaws positioned themselves at the top of the *monte* to cut down large eucalyptus trees, guiding their fall with shouts and people fearfully parting and taking shelter behind other trees. These eucalyptus trees were then cut up into chunks and branches were also cut off the trunks. These branches and trunks were then handed from one *brigadista* to the next to be gathered at a designated space so as not to remain scattered across the *monte* where they are prone to spread fire and make the terrain difficult to access.

The violence of this method of cutting down trees sometimes implies damaging other trees, including loved trees, as a *brigadista* shares:

> "When there is collateral damage like when you cut a eucalyptus and an oak tree falls or you break an oak, yes, it gives me anguish. Yes, it's nonsense, but yes, but yes, it makes me very sad." (Interview Xoana)

The emotional distinction between destroying wanted and unwanted trees is expressed by various *brigadistas* who put in care not to hurt oaks, chestnuts, and other loved trees. The potential collateral damage associated with the cutting down of eucalyptus or acacias in such violent ways is felt by *brigadistas*, who turn to methods of destruction that kill the trees in a more targeted manner.

The second technique of destruction used by *brigadistas* is called girdling, or ring-barking, and offers a more targeted manner of killing eucalyptus and acacia. Ring-barking entails making a horizontal cut in the bark all the way around the tree, at a height of about 1.20 meters. This full circle is then peeled down to the roots, which also involves removing soil from the roots, to lay them bare. In this way the tree is left without protection and fungi, as co-destructors, are able to enter the tree's system and make the tree ill. Additionally, since the bark allows the tree to transport nutrients between the roots and the leaves, its removal disrupts the tree's access to nutrition, slowly killing it.

Ring-barking takes advantage of and responds to the relations that acacia and eucalyptus engage with to kill them more effectively. When a eucalyptus or acacia tree is cut down, it tends to instantaneously grow new sprouts, yet when the bark is peeled, the tree is said to die more slowly as the arrival of deathly fungi is facilitated so that the tree gets sick and does not produce new shoots. When a eucalyptus tree is cut, it sprouts back from the same trunk, requiring *brigadistas* to return to the same trees several times. Acacia, on the other hand, extends below the surface as one subterranean entity, the ability of which to resist human destruction is described in mythological terms:

> "By cutting acacia, you give more force to the root so that it sends nutrients to the other shoots, even new shoots that are born elsewhere, that's why the fight against acacia is more difficult than all the ones I know because you never finish killing the plant [by cutting]. The only thing you do is dismember it as if it were the heads of the Hydra, so that they grow new and stronger." (Interview Fabio)

Ring-barking is used against both eucalyptus and acacia as a way to weaken the trees so that they do not resprout with the same strength as when simply cut down with a chainsaw and ultimately end up dying. Yet acacia is commonly referred to as a more difficult 'enemy', as it extends through an elaborate root system which sprouts trees in various places, strengthening the existing root system. The method of bark peeling responds to the plant's reaction to being attacked and allows *brigadistas* to target their enemies rather than their friends in a precise manner.

The final way used to destroy eucalyptus and acacia is by pulling young exemplars of the trees out of the ground. This method is mainly used to remove acacias from the *monte*, as their underground root system allows the tree to spread distances across the *monte* and pulling these root systems out allows for other plants to gain access to nutrition and water in the soil. Additionally, the pulling out of young acacias tends to be a practice used during repeated sessions of the *Brigadas* at sites already worked on in the past where the shoots that are manually removed tend to have been weakened by previous interventions.

The repetitiveness of interventions is also an important component of the techniques of destruction used by *brigadistas* as said practices and their frequency respond to the relational capacities of the trees to expand at the expense of other, desired trees.

> "Let's see, to fight against invasive species like acacia, you have to constantly fight. Year after year until you finally manage to extinguish it, but it is complicated. Because if only one person does it, for example in the *monte* of Lentille with one person with all the acacias, they would finish cutting and there would already be new ones that have grown back." (Interview Pablo)

The fight against eucalyptus and acacia requires a large number of people to engage in practices of destruction at regular intervals. As the previous quote illustrates, awareness of the relational capacity of these trees to expand at the expense of other (more desired) forms of life requires *brigadistas* to act in large numbers and frequently in order to be ahead of the acacia. Acacia and eucalyptus' ability to resist destruction is responded to by *brigadistas'* techniques of destruction. The trees' invasive capacities warrant a human response and human techniques of destruction aim to win what my interlocutors often describe as a war, with "chainsaws as shotguns" (interview, Fabio).

6.4.2 Knowledge for destruction

The aforementioned methods of destruction rely on embodied knowledge as illustrated through the rich empirical stories and experiences. By participating in *rogas* (work-sessions) people acquire knowledge, understanding, and a sensory familiarity with acacias and eucalyptus. This then affects the way these trees are imagined, as mythical figures or murderers. Yet the knowledge that *brigadistas* use to imagine acts of destruction as care, and imagine the agency of these trees, is not solely attained through experience and embodiment, as arguably a more romantic reading of the empirics would lead one to believe. Instead, formal scientific knowledge is negotiated by *brigadistas* and local communities, through workshops and informative exchanges.

Firstly, after the *roga* or work-session, the group enjoys a lunch prepared by the local community and people usually discuss their experiences with these trees and what they have heard works in different places. *Brigadistas* attend conferences, workshops, read books and watch videos, and visit other communities to learn about different practices and experiences of destruction. In this sense, a network exists that circulates knowledge, tests this knowledge, debates, and circulates it further. Word-of-mouth and personal relations form the medium through which knowledge is transferred, rather than there existing a widely accepted (standardized) source that can be consulted for knowledge on the removal of eucalyptus and acacia. Through experience and experimenting, *brigadistas* and local communities test different strategies and theories for effective destruction, creating knowledge about what methods work best in what circumstances, what tools to use and how, and knowledge about how different trees will respond.

Secondly, workshops are organized after *rogas*, where scientists working on the eradication of eucalyptus and acacia come to the group to share their knowledge. One such occasion was experienced in Portugal in May 2023, where a researcher from the University of Coimbra gave a PowerPoint presentation sharing a synthesis on the scientific literature that exists on the topic of eradicating said trees, in addition to her field work and experiments. *Brigadistas* shared their points of views during this session, where they asked the scientist about insights relevant to specific situations and also shared their personal experiences, sometimes in line and sometimes in contrast with scientific claims about eradicating these trees. For example, the effectiveness of ring-barking was discussed as an alternative to cutting down trees, where the scientist and *brigadistas* reflected on their own ideas about what works better when, without considering there to be a 'best' way. In addition to negotiating scientific knowledge and embodied knowledge, *brigadistas* also use scientific claims to validate certain choices of destruction they make. For example, a *brigadista* shared that they had been recommended to opt for the use of goats for the eradication of acacias and that the scientist had shared her observations from her fieldwork where acacias that were eaten by goats would resprout in places outside the area closed off for the goats, moving there through their elaborate root system. In this sense, experiential knowledge and scientific knowledge are combined and negotiated within this group of actors, without clear 'universal' answers.

6.4.3 Motivations for destruction: creation and survival of a desired community

Acts of destruction have as objective the creation and maintenance of a desired community in the *monte*. The struggle against acacia and eucalyptus is warranted for the survival of humans and desired other forms of life. The threat imposed by these trees to the survival of a desired human and nonhuman community relies on distinct, yet related, (imagined) agencies (Jones & Cloke, 2008) of said trees that allow them to spread fire and outcompete other plants.

The threat of eucalyptus and acacia to human survival is vividly present in the minds of the local communities living in Froxán and Lentille. These communities have first-hand witnessed huge, unstoppable fires that have surrounded their villages, burned large parts of their common lands, burned buildings in their villages, and still keep them up at night. Their quest for destruction therefore considers the direct threat posed by these trees to human survival, with Roi, an inhabitant from Lentille, sighing that "when the fire comes back, and it will, at least we won't burn" (Interview, Roi). Yet fires are a common problem all across Galicia (Pernas et al., 2011), and as we have seen different proposals circulate with regard to taming, halting, avoiding, and combating fires. The vanguard vision of *destruction as care*, however, mobilizes the theme of fires to engage in different sort of action that cannot be understood as a mere result from this phenomenon, but rather mixes together practices, knowledges, experiences, and visions of the a desirable future.

In addition to their collaboration with fire to spread, *brigadistas* envision acacias and eucalyptus to engage in relations that favor their own hegemony in the *monte* at the expense of other lifeforms. A first relational way in which eucalyptus favors its presence in the *monte* is by covering the soil with leaves that are not easily decomposable by soil organisms as these organisms have developed to process leaves and plant material from trees with longer presence in the Galician *monte*. These non-decomposed leaves effectively create a blanket over the soil and inhibit other plants from growing. This process is also said to create a more acidic environment in the soil, which impedes other plants' growth. The roots of both acacias and eucalyptus are considered strong, deep networks that occupy soil not yet reached by other plants, allowing them to use nutrients and water that are available in

these places. And particularly acacia's ability to grow in high density allows it to crowd out other plants (and animals) that are thus unable to live in the *monte*. These antagonistic relations that the trees engage in have aided their presence in the *monte*, with one *brigadista* recounting the way acacia took over the *monte* after the fire in Lentille:

> "Nothing could be seen (…) where the old village was, the roads, all of them, even those spectacular stones that are half hidden there and that. So it was tremendous, it felt like I was in a city surrounded by invading troops." (Interview Sylvia)

This *brigadista* again uses warfare terminology to emphasize the violent character of the presence of these trees in the *monte*. In Froxán, a different *brigadista* had described the planting of oaks, chestnuts, and other desired species along the East as creating a 'front' against the fire, as these trees would halt the fire, rather than aid it like eucalyptus and acacia do. Eucalyptus and acacia's behaviors or affordances are not considered to be intrinsic to these trees, instead they become through relations that they engage with. In this sense, *brigadistas* consider the undesirability of eucalyptus and acacia not on what the trees *are* but rather on what they *do*, particularly considering the way they are imagined to interact within relations.

As the quote at the beginning of this chapter alludes to, *brigadistas* conceive of their acts of destruction as helping those beings that are disadvantaged in the *monte*'s community, much like the A-Team stood up for disadvantaged individuals. Yet *brigadistas* do not conceive of the purpose of their destruction solely as creating a desirable human community, instead the harm to unwanted intruders is justified through the consideration of the survival of (desired) nonhumans too. The following quote illustrates this sentiment:

> "For me the acacias are like murderers of, imagine, children because they cover everything, all of the *monte*. They don't let the little oak trees (*carballiños*) grow as they are. If they could live and share the monte, I obviously would not cut them down. But they eat the small ones, the small oaks, and then they go ahead making their own way. For me an acacia tree is like a murderer, you know like a pedophile, a murderer. I wouldn't feel sorry for killing them, even though I'm a super pacifist, I would not feel sorry because they kill." (Interview, Xoana)

This *brigadista*'s account of acacias as murderers and thus fit to be destroyed implies a relational understanding of the beings in the *monte* as an ecological community, warranting acts of destruction to include desired trees, plants, animals, and other beings into this community. Acacias are symbolically imbued with violent capacities, they are termed murderers (of children), making the destruction *brigadistas* embark upon to set free those 'small ones' also violent. Indeed, if these particular trees were not so violent and would be able to share the *monte*, then they would not be destroyed. The objective of acts of destruction is to compensate for the 'small ones' to enter the negotiation of surviving within the community; to include those currently excluded by the presence of acacias and eucalyptus. The generational approach of differentiating between invasive trees as in some way advantaged and desired trees like oaks as young/little resonates with the way the species are imagined to interact with each other and with nutrients, water, and light to grow in different – relational – ways. Trees desired as part of the community like oaks and chestnuts suffer at the hands of these fast-growing intruders who make nutrients unavailable and shade these trees, inhibiting their growth.

6.4.4 Reversing State oppression to enable desired community

While the previous section showed how two species are criminalized and made unwanted by the imagined relations they engage in, and inhibit, in the *monte*, this section expands on the vision of *destruction as care* which considers how rural people were excluded from their lands as a prerequisite to the flourishing of these two tree species. *Brigadistas* imagine how historical interventions into the *monte*, at the hands of a dictatorial state, sought to transform the *monte* into a resource provider, extracting living beings from their ecological relations to turn them into extractable resources manageable through plantations (Tsing, 2015). As Tsing (2015) argues, the creation of plantations requires cultural work of alienation, allowing for the production of detached assets from simplified ecologies and indeed turn both humans and nonhumans into resources. Regarding this process in Galicia and in the context of the *Brigadas Deseucaliptizadoras*, González-Hidalgo et al. (2024, p. 238) write, "not only did State Forestry engineers direct the plantation of thousands of hectares of usurped forest lands with pines and eucalyptus, but also struggled to cram the "eucalyptus = progress" association into rural mentality – in conjunction with its "oak = backwardness" counterpart". In this sense, this group of actors considers how campaigns of violence and normative depreciation of communities in Galicia at the hands of a dictatorial state sought to separate local communities from their entanglements in the *monte* so that plantations could proliferate.

Brigadistas consider the destruction of eucalyptus and acacia not solely acts of care for loved species, like oak and chestnut, and their ecological entanglements, but also care through the destruction of historical relations that displaced rural people from their lands and implemented the mentality of plantations as progress. Said process of expelling people from common lands is not a relic of a distant past for many *brigadistas* as they can relate to the process of dispossession and land-grabbing that their parents and grandparents lived through (Seijo, 2007) by imagining a past that was taken away from their ancestors. In this sense, *brigadistas* do not pretend to be working towards a lost past, but instead target the relations of power that removed autonomy from local communities. As such, destroying eucalyptus and acacia takes on a vindictive form of wishing to destroy the relations of exclusion that have shaped how the Galician *monte* has come to be populated and particularly the strong presence of eucalyptus and acacias. As one *brigadista* explains about the relation between the State and rural communities:

> "So it's like, I don't know, like they tell you or try to tell you, "look, you're stupid, you don't know how to do anything, get off, I'll do it," right? Well, David vs. Goliath." (Interview Sylvia)

The metaphor of David versus Goliath represents a sentiment shared by many *brigadistas* I engaged with through the fieldwork. The impotence and instilled minority complex that is known as *auto-odio* or literally, self-hate, proliferates the way *brigadistas* imagine Galician society to understand itself. They note that this *auto-odio* is derived from decades of violent oppression by the Franco dictatorship, which, in addition to displacing people from their lands, forbid use of the Galician language, violently ended all forms of (perceived) resistance, and silenced Galician cultural traditions. Even though the State could count on rural people's cooperation in many instances of pursuing eucalyptus plantations in Galicia, for *brigadistas* the loss of autonomy at the service of capitalist growth and monocultures is a defining pillar of the vision of *destruction as care*. While an older inhabitant of Froxán I spoke with looks onto the transformation of their lands into plantations in a positive light – as their father was a forestry worker, *brigadistas* understand such nuance but still take an active stance against eucalyptus.

Said interventions at the hand of a dictatorial State resonate with a rich body of work within political ecology, situated predominantly in the Global South that consider the centralization of forestry management (by colonial States) with the forced alienation experienced by local communities from both their lands and their livelihoods (Gadgil & Guha, 1993; Peluso, 1992; Ribot & Peluso, 2003). Particularly, the making of subjects through disciplinary techniques like standardization, bureaucratization, and surveillance is illustrated by scholars like Scott (1998) who shows how the making legible of forests also shaped a society fit for centralized State control, detaching them from their commons. He further demonstrates how the translation of biodiverse forests into uniform monocultures fit for timber extraction required surveillance and regulation of the forests and its people, carried out by local chiefs and traditional leaders who enforced State forestry objectives. Peluso (1992) highlights similar processes of State recruitment of community leaders in Indonesia to carry out State interests like barring community access to forests and forbidding traditional practices in the forest. Such observations resonate with what *brigadistas*' imagine as an unwanted past in forestry governance; a past they are keen to move away from. Like the following *brigadista* shares, when asked to elaborate on the current situation of the commons:

> "Well now, they are better than before. Because they [communities] have become aware of what their *monte* is, not like before when they were ... garbage. Before, it was managing the forest, and selling wood to ENCE who bought votes for the mayor, from local chiefs (*caciques*) directly which is the part that we need to stop in order to stop having this problem, because for me having local chiefs (*caciques*) – wherever – is a problem because what it does is disconnect people from what belongs to them which would be much more, and the other to have subjects. Because in the end [communities] become subjects.
>
> (…) So for me, this role of power should be, like, tremendously punished (...) For me it is something that we should leave behind because it is certainly *machista* to have absolute control over what is done and what is not done." (Interview Pablo)

The *brigadista* in question refers to the disconnection between the *monte* and communities, resulting from the transformation of the *monte* into a plantation of mainly eucalyptus for the pulp factory ENCE, like the uniformity imposed onto forests by (colonial) States in aforementioned work on forestry politics. This *brigadista* points to the parallel process of subordination of communities to the interests of capital and the *monte* becoming 'garbage' as a reference to the valuelessness of the *monte* to local communities as their form had changed into monoculture plantations managed by companies. He explicitly opposes absolute control over the *monte* (mediated by local chiefs) implied by plantations and the concomitant absolute control over human communities who are made into subjects through said interventions. In this sense, the vanguard vision of *destruction as care* that guides *brigadistas*' actions in the *monte* actively counteracts the subjectification of local communities as desirable forestry actors (e.g. Agrawal, 2005; Peluso, 1992) to instead represent a form of resistance, through destruction.

Absolute control over the *monte* and its community through the leveraging of particular knowledge that seeks to maximize the production of a particular species, e.g. eucalyptus, through plantations is opposed by *brigadistas*. The synonymity between the State and private actors within such processes of dispossessing local (human) communities is made explicit by *brigadistas* who find that control over entanglements in the *monte* must be opposed at any cost. This includes considerations of whose

responsibility it is to remove eucalyptus and acacia from the *monte*. The following *brigadista* makes clear that 'outside' intervention of any sort should be opposed:

> "It is the citizens' responsibility not to let those who rule do what they themselves should be doing, and I also think that they [politicians] should not be allowed to rule in these things. That is to say, if we give the politicians a lot of ground, they will take advantage of it. If we can limit their range of action and say the *monte* is not to be touched, but not to be touched in the sense of coming to clean it nor that you regulate what can be planted and how to plant it, nor to give up expropriated land to windfarms or other types of companies who can come in and do damage that is large and long-term. For me it shouldn't be. It should not be the responsibility of them with public money nor private, rather it should be a field where they do not enter." (Interview, Fabio)

The ordering of the *monte* is considered as inextricably linked to ordering of social relations, making the *monte* 'a field where they do not enter', referring to both private and public actors. In this sense, even the regulating of what plants and trees are allowed in the *monte* is opposed, regardless of the ends such regulations would seek to serve.

Within the group exist diverse views regarding collaboration with the State, yet no *brigadista* is content nor supportive of Galicia's government's visions and policies regarding the *monte* nor did any of my interlocutors express hope for change within institutional politics. The need for a Galicia-wide plan to end the hegemony of eucalyptus and acacia is recognized by some of those interviewed, but they consider the chance of political change to be nihil.

When it comes to other public bodies, the *Brigadas Deseucaliptizadoras* do receive funding from and participate in various supranational, EU projects like NextGenerationEU – which is a "€806.9 billion stimulus package to transform Europe after the pandemic, focusing on six key areas: green transition, digital transformation, social infrastructure, inclusive growth, health and equality" (European Commission, n.d.). Besides, national funding is received from the Biodiversity Foundation from the Ministry of Ecological Transition. The general sentiment is to use institutional bodies to the extent that is beneficial to the *Brigadas*' mission of eradicating eucalyptus and acacia together with local communities. In this sense, communities are not passive recipients or respondents to State policy but instead actively bricolage existing bureaucratic frameworks to ensure community control over their resources (Li, 2007; Scott, 1998). The adoption of the language of science (Forsyth, 2004) in communications and applications for funding, by using terms like 'sustainable development' and 'ecosystem restoration', particularly by organizers of the initiative, can be considered conducive of the *Brigadas*' financial success. Further grants were received from private companies, like Lush and Patagonia, without aversion or fears about greenwashing or legitimizing such private parties; the engagement is seen as instrumental. If favorable to achieving their mission, *Brigadas* will not opt against collaboration with (supra-)national public and private parties, adapting their communication to target audiences while retaining control over their resources, organization, and practices.

6.4.5 Imagining the human within the community

In extension to the opposition to State control over human communities and the desire for local autonomy, *brigadistas* conceive of a distinct human-nature relationality in the *monte* than underpins State imaginaries. Namely, *brigadistas* conceive of humans as embedded within networks of trees, animals, plants, fungi interdependently rather than hierarchically with humans positioned 'above'

nonhumans. As illustrated earlier, such a view of the community paints acts of destruction as strengthening the ability for the 'small ones' to survive well within this community, implying a rupture in the assumed ontological discontinuity between humans and non-humans (Blaser & De La Cadena, 2017). Furthermore, the threat of fire to human existence further serves as a reminder of the strength of particular trees that populate the *monte*. Desired trees are personified making acts of destruction valid as standing up for those not able to fend for themselves while simultaneously wanting to combat the existential concern imposed by the presence of eucalyptus and acacia. In this sense, *brigadistas* conceive of the world as intimately shared (Bresnihan, 2015) and extend subjectivity towards trees, where some are considered to be 'friends' and others are 'enemies' as this *brigadista* tells me during an interview:

> Interviewer: And don't you feel sorry for cutting down these trees?
>
> Fabio: I love it, I love it. I don't have any appreciation for them. I really enjoy using the chainsaw to cut down trees. (…)
>
> Interviewer: But if I ask you to cut down an oak tree, will you have the same fun?
>
> Fabio: No, it's going to hurt. I like to kill my enemies, not my friends.

The move to anthropomorphize and distinguish between wanted and unwanted trees as friends and enemies not only recognizes the interdependence of life forms but also flattens the hierarchy between humans and nonhumans. This move to anthropomorphize trees in the *monte* may also "foment a sense of connection across difference" as Barnett (2023, p. 12) writes, quoting Jane Bennett's Vibrant Matter where the author considers that "maybe it is worth running the risks associated with anthropomorphizing [...] because it, oddly enough, works against anthropocentrism: a chord is struck between person and thing, and I am no longer above or outside a nonhuman 'environment'" (Bennett, 2020, p. 120 quoted in Barnett, 2023).

The shaping of *brigadistas*' subjectivities through acts of destruction resonate with this observation, where the following *brigadista* reflects on how seed dispersal of acacia and eucalyptus reminds her of her position in relation to trees in the *monte*:

> "That is, a seed or a seed bank is latent in the earth for decades or even, I don't know, 100 years waiting for an opportunity to get out. Of course, then you tell yourself, well, I think that because I am a man or a woman I am number one in creation, I am the king of the planet. But I am not the king of the planet." (Interview Sylvia)

By engaging with eucalyptus and acacia on a frequent basis, this *brigadista* shares the realization that she is not the number one in creation. This realization stems from the repeated embodied engagement with these trees, alongside scientific information shared through collaborations with scientists from universities who specialize in invasive species in Portugal and Galicia.

Human exceptionalism is somewhat done away with through the vision of *destruction as care*, where it is humans that are destroying unwanted trees so that a desired nature (and autonomous human communities) can prosper, but there is a simultaneous realization of the immensity with which eucalyptus and acacias are present around us. This realization plays an important role in imagining trees in the *monte* not as extractable resources, but instead as agents that are imbued with relational capacities – that may go beyond our individual human capacities. In this sense, the unruliness in how

seeds of acacias and eucalyptus disperse and wait for an opportunity to come out serves as a reminder of human embeddedness in networks where relations exist beyond human control; effectively pushing the human off of the king's throne in ecological relations.

Due to embodied interactions with acacia and eucalyptus, *brigadistas*' conceptualization of the *monte* and the beings that live in it is shaped. Indeed, a changing relationality to trees and other lifeforms in the *monte* is cited by several *brigadistas*, especially those coming from non-rural lifestyles, as a result from their engagement in the *Brigadas Deseucaliptizadoras*. Some *brigadistas* admit to having known little to nothing about how the trees they work with live and reproduce until they came to interact with them. In this sense, as opposed to classical work in political ecology contrasting indigenous ontologies and cosmologies with the State in forestry governance (Escobar, 2011; Li, 2007), the way *brigadistas* imagine the *monte* and pursue the vision of *destruction as care* relies on a range of knowledge-ways and a changing perception of the *monte* and its web of interrelations. In this sense, taking part in the initiative is both a way to pursue already established visions while simultaneously transforming *brigadistas*' subjectivities.

6.5 Conclusion

How can we understand the aims and motivations of a group of volunteers that goes to the *monte* at least once per month to destroy eucalyptus and acacia, while most people in Galicia spend this time doing something else? Through the notion of interactive co-production, this chapter has followed the meanings that *brigadistas* give to their acts, to the *monte*, and to what they are seeking to achieve in their vision of *destruction as care*. My work has not been to judge their statements nor contest how they imagine acacia and eucalyptus to have become killable. I have been interested in the components of this vanguard vision, summarized in the table below.

	Destruction as care
Landholder	Communities Autonomy from State
Ways of knowing the *monte*	Embodied Memory Stories Experience Scientific Local and extra-local
Understanding of life in *monte*	Diverse community Trees agency with strong and weak actors Friends and enemies Antagonistic and loving relations Emotional involvement beyond instrumental uses Reciprocity in violence
Social life	Local autonomy Galician identity

Table 3: vanguard vision destruction as care

The empirical stories that have been shared in this chapter illustrate how the vanguard vision of *destruction as care* is imagined and put into practice, relying on experimental, scientific, and embodied knowledge to imagine a community to be created *through* destruction. In this sense, the *Brigadas* show how destruction and creation are sides of the same coin.

With regard to imagining a community, composed of particular desirable beings – read plants, animals, and humans – scholars have drawn parallels between the exclusion of unwanted plants or animals, deemed non-native, and concomitant processes of fear of foreigners (Peretti, 1998; Mulcock & Trigger, 2008; Warren, 2012). This body of literature engages particularly with the construction of 'invasive' and 'nativeness', where the term invasion "is not a neutral metaphor, but a nationalistic feedback metaphor that raises associated fears that our country will be invaded by foreigners" (Larson, 2011, p. 163). Olwig (2003) warns that "discourses concerning the threat of alien species to national landscapes have a curious tendency to bleed into discourses concerning the threat of alien races and cultures to the native people and culture of these same nations." (Olwig, 2003, p. 61). Peretti (1998) echoes this when he notes that hardline biological nativism risks reproducing problematic ideologies – such as those underpinning racism and nationalism – by uncritically associating purity and belonging with ecological value.

Nativeness and the quest to attain a 'Galician' nature seeks to exclude and destroy eucalyptus and acacia as alien intruders, in some way resonating with previously introduced literature on invasiveness and nativeness. Yet the sociopolitical context that has shaped *brigadistas*' intervention into the *monte* shakes up the corollary binary and its associated prescription of humans and nonhumans belonging. By opposing the knowledge claims that lay at the basis of State conceptualizations of the *monte* and its communities, *brigadistas* base their rejection of eucalyptus and acacia on embodied knowledge, experience, and a relational imagination of the *monte*, rather than solely seeking formal scientific justifications for their acts of destruction. The imagining of acacias and eucalyptus as actively oppressing other desired plants, by taking up physical space or stealing resources necessary for desired plants to live, make these invaders kill-able (Haraway, 2008) with embodied experience strengthening the imaginary of the violence of these intruders. In this sense, the case study brings two important considerations to aforementioned thought on the construction of species' belonging, namely the shaping of tree species through sociopolitical relations and secondly, the species' unwantedness being informed by embodied, experiential knowledge rather than solely scientific authority.

While existing scholarship critically approaches the parallel between the dichotomic notions of native/alien nonhuman and human beings, the case study presented in this chapter draws attention to the actors mobilizing parts of such discourses and how notions of belonging can be complexified when considering the historical sociopolitical contingencies that have shaped such species' presence. Studies of landscape management and notions of native/alien species are critical of these processes, and argue that notions of nativeness, for example, are "theoretically weak and internally inconsistent, allowing familiar human desires and expectations to be misconstrued as essential belonging relationships between biota, places and eras" (Chew & Hamilton, 2011, p. 36). In an interactional co-productionist manner, this case study has not intended to argue for such essential relationship but rather has inferred into how and why actors imagine such essential relations to be reconstituted through destruction. The vanguard vision of *destruction as care* inspires environmental practices that seek to revert sociopolitical power structures that have historically excluded communities from their

commons, in this sense imagining a species to have been introduced into an initial, desirable community that suffered at the hands of this intruder. The desire to exclude eucalyptus and acacias from the *monte* due to their non-belongingness seeks to achieve a *monte* that consists of more equitable relations. As we have seen, the motivation for destroying eucalyptus and acacia is very much rooted in the desire to end violence perceived within these relations, with reciprocal violence. In this sense, the question Peretti (1998) poses to shake up the significant influence of the idea of purity in debates in environmental science, namely that "if peaceful coexistence in a multicultural society is a good goal for humans, why not for other species?" (p. 35) is given substance as to how species' co-existence is imagined and sought to be achieved.

7. Discussion

> "The binary division between resistance and non-resistance is an unreal one. The existence of those who seem not to rebel is a warren of minute, individual, autonomous tactics and strategies which counter and inflect the visible facts of overall domination, and whose purposes and calculations, desires and choices resist any simple division into the political and the apolitical. The schema of a strategy of resistance as a vanguard of politicization needs to be subjected to re-examination, and account must be taken of resistances whose strategy is one of evasion or defense – the Schweijks as well as the Solzhenitsyns. There are no good subjects of resistance." (Colin Gordon in Foucault, 1980, p. 257)

The preceding chapters have illustrated how State actors, local communities, and a group of activists named the *Brigadas Deseucaliptizadoras* engage in different practices in the *monte* to work towards their visions of what the *monte* should be. While the empirical chapters treat groups of actors (activists, the State, and communities) as somewhat homogenous and internally stable, in this discussion the boundaries between such actors and within such groups are unsettled. As the introductory quote of this chapter points out, acts of resistance may not always look like heroic displays of defiance. Accordingly, recognizing complexity within the ways actors respond and negotiate power allows for a richer analysis to be undertaken. Through the lens of interactional co-production, this discussion considers how knowledge is negotiated by different actors, reflected in their practices and conditioned by how they imagine the *monte* to be and how it ought to be.

While political ecology and foundational work on power and forestry have exemplified how expert knowledge has served the expansion of the State and its power (Scott, 1998; Springate-Baginski & Blaikie, 2007; Vandergeest & Peluso, 2006) and work in the frame of neoliberal natures and governmentality tend to conclude how such knowledge creates appropriate subjects (Anand & Mulyani, 2020; Büscher et al., 2014b; Holmes & Cavanagh, 2016), recent developments in political forestry (Forsyth, 2019; Birch, 2021) has raised attention to the way knowledge is negotiated across sites rather than being 'exerted upon' social actors. In this discussion I take forward previous chapters to consider how knowledge about forests and good forestry is produced and negotiated by different actors, and how formal scientific knowledge, in this sense, does not simply originate in a space to be used by State actors to exercise power upon publics but is instead negotiated and contested at different sites.

I consider the Galician *monte* to be what Hilgartner (2015) describes as a contested space in which actors imagine and work towards the attainment of a future that is different from the present (and past). While visions of the *monte* circulate, such so-called vanguard visions do not necessarily gain precedence over others nor do they become accepted by large collectives, yet their circulation is worthy to inquire into as they prefigure potential futures and illustrate how knowledges are negotiated. Considering the vanguard vision of *destruction as care* and the way commons communities have (historically) negotiated and interacted with institutional imaginaries of the *monte* has allowed me to consider how ideas of what the *monte* is and should be originate, circulate, gain traction, and interact.

In this chapter, I will first briefly recap the main findings from the empirical chapters, after which I will compare these imaginaries and vanguard visions, to illustrate the importance of engaging with diverse, situated visions and historical contingencies to fully understand how imaginaries are negotiated

(beyond adhering to neoliberal logics). The final section reflects on shortcomings of my approach and suggests avenues for future inquiry.

7.1 Institutional imaginaries and vanguard vision

7.1.1 Historical imaginaries of the monte

The three historical imaginaries identified through a review of scholarly literature, grey literature, policy and legal documents, newspapers, and other secondary sources were that of *forestry for the restoration of nature* (Section 4.1), *forestry for productive prosperity* (Section 4.2), and *forestry for sustainable development* (Section 4.3), each characterized by distinct landholding patterns, epistemologies, understandings of the *monte*, and approaches to public engagement.

The imaginary of *forestry for the restoration of nature* is state-centered, prioritizing ecological restoration and the preservation of a diverse nonhuman community, with trees matching local ecological conditions known through scientific methods inspired by German forestry science (Hölzl, 2010). Knowledge of the *monte* is grounded in cartography and ecological assessment, aiming to restore or maintain 'pure nature' and a balanced form of productivism. The public is often viewed as destructive or lacking expertise, leading to strategies that focus on exclusion and education to align public behavior with restoration goals.

The second imaginary, that of *forestry for productive prosperity* was institutionalized under Francisco Franco's government. This imaginary positions the *monte* as governable by standardization, with extractivist, and productivity-driven logics in pursuit of the creation of a Grand Nation. The *monte* is understood primarily through production cycles and planning for maximum output, with nature conceptualized as a resource to be optimized for productive gain and managed to support large infrastructures like water basins (also in service of productivity). The public is thereby situated as incapable of contributing meaningfully, and state-public interactions in the *monte* consist largely of forceful appropriations of common lands and 'modernization' – exemplified by the modernize or emigrate ultimatum given by the State forestry director, Martinez Hermosilla in 1957 (Seijo, 2007a) – in line with the development of industrial clusters.

The final imaginary, that guides institutional interventions into the *monte* today is that of *forestry for sustainable development*, where private landholding is considered desirable and where forestry is informed by advanced technological tools such as remote sensing, modeling, and also economic valuation. The *monte* is valued for its functional diversity and multifunctionality, with an emphasis on optimization and economic sustainability – with new markets being proposed for the multifunctional exploitation of the *monte*, like carbon credits and ecosystem service payments. The public is perceived as largely uninterested, and strategies for engagement focus on providing economic incentives to align individual and collective interests with sustainable management practices.

7.1.2 Commons communities negotiate institutional imaginaries

Institutional imaginaries, while proliferating through formalized channels of governance, scientific collaboration, and corporate alliances, derive legitimacy not solely from their institutional architects but also through articulation across various sites, for example by actors positioned outside institutional epistemic or ideological realms. The way commons communities have historically responded to and

negotiated institutional imaginaries has varied, and Chapter 5 particularly elaborates the way a peri-urban commons community negotiates today's sociotechnical imaginary.

Preceding the Franco regime, state encroachments onto communal *montes* were met with infrapolitical resistance – decentralized, quotidian acts that subverted formal land-use regulations while sustaining traditional practices. Scott (1990) refers to infrapolitical resistance as "disguised, low-profile, undeclared resistance" (p. 198) that underpins "the more visible political action on which our attention has generally been focused" (p. 184). Furthermore, sabotage and disobedience are documented ways in which people defied the State's intentions to appropriate land and collect tax payments from land-use, acts also strengthened by the participation of local elites interested in maintaining feudal structures. The Franco dictatorship's (1939-1975) aggressive campaign to dismantle common land tenure and impose a centralized, productivist forestry imaginary lay bare individualized, local dissent complemented by collective mobilization. Communities combined enduring everyday tactics, like symbolic land occupation and the maintenance of customary burning practices, with organized protests and legal challenges. An important moment occurred in the 1970s with the AP-9 highway protests, which coalesced dispersed rural communities into a movement demanding legal recognition of communal land rights. This struggle exemplified how marginalized groups strategically appropriated institutional discourses (e.g., property law, environmental impact assessments) to legitimize their visions, effectively complementing acts of infrapolitical resistance to pursue an alternative vision of the *monte* rooted in territorial autonomy.

Ethnographic engagement with the community of Mourente and other communities in Chapter 5 further strengthened the central role of autonomy in commoners' imagining of the *monte*. Through adoption of institutional language around ecosystem services and working together with forestry engineers, commoners move within an institutional setting in a way that serves their imaginary of localized decision-making for a better future in the *monte*.

7.1.3 Brigadistas' vanguard vision of destruction as care

The vanguard vision of *destruction as care* rests on embodied, experiential, and scientific ways of knowing, where eucalyptus and acacia are made kill-able (Haraway, 2008) due to the violence associated with their ecological presence and the sociopolitical history associated with their abundance. The way this vanguard vision materializes in practices that are not common nor institutionally stabilized, namely voluntary action on the weekend by local communities and volunteers from all over Galicia, can be better understood through the co-productionist approach employed in this thesis. Namely, the practices of destruction, of cutting, pulling out trees, and ringbarking provide embodied ways of knowing these trees and further fomenting their antagonism. The difficulty with which these trees are eradicated makes them stronger enemies. Additionally, the stories told about the dangers, fears, and experiences with fire add an existential dimension to the way eucalyptus and acacias are imagined. The violence imagined as characterizing these trees' presence in the *monte* is derived from first-hand experience in the *monte* and scientific knowledge about invasive trees and their effect on local ecosystems, with further violence associated with historical State-led interventions into community lands. The violence characterizing these trees' presence in the *monte* is met with violence, with *brigadistas*' acts figuring into a larger restorative project of creating a desired *monte*.

7.1.4 Summary of imaginaries, visions, negotiations

The following table summarizes the aforementioned imaginaries and their negotiations. In the next two sections the content of these empirical findings will be used to draw conclusions regarding temporal and spatial negotiations of imaginaries and how these contribute to both political ecology and STS scholarship.

	Forestry for the Restoration of Nature	**Forestry for Productive Prosperity**	**Forestry for Sustainable Development**	**Commons communities**	**Destruction as Care**
Landholder	State	State	Private	Communities	Communities
Ways of knowing the monte	Cartography Ecological characteristics	Production cycles Planning for productivity	Remote sensing Modelling Economic valuation	Memories Stories Scientific	Stories Memory Scientific Experience Local and extra-local
Understanding of life in monte	Diverse nonhuman community Pure nature Balanced productivism	Standardized Extractivist Productive nature	Functional diversity Optimizable Multifunctional nature	Trees and monte as service provider Historically as source of subsistence Belonging to local communities Identity and sense of place	Diverse community Trees' agency with strong and weak actors Antagonistic and loving relations Emotional involvement beyond instrumental uses Reciprocity in violence
Public (social life)	Destructors Unknowledgeable	Incapable	Uninterested	Local autonomy Antagonistic towards non-commoner public	Local autonomy
Interaction with public / Interaction with State	Exclude and educate	Modernize or emigrate	Incentivize economically	Distrust	Distrust

Table 4: Negotiating imaginaries, visions

7.2 Beyond totalizing neoliberal nature

The Galician *monte* can be framed as a contested political arena, where questions of power, access, and justice intersect, resonating with political ecology perspectives on forestry (Heynen & Robbins, 2005; Peluso, 1992; Springate-Baginski & Blaikie, 2007; Vandergeest & Peluso, 2006). Political ecologists have how struggles of land (tenure, access, and meaning) reflect and reinforce deeper power inequalities, with the neoliberalization of nature thesis (Büscher et al., 2014; Castree, 2008a; Heynen & Robbins, 2005) illustrating the negative consequences for local communities and forest-dependent peoples when natural processes and entities are subsumed by market logics (Chomba et al., 2016; Poudel et al., 2015).

The pursuit of an organized *monte* in accordance to the imaginary of *forestry for sustainable development* prescribes solutions that resonate with the neoliberal nature thesis. Two main causes of deterioration of nature in the *monte* and loss of societal wellbeing derived from the state of the *monte*, are imagined to be rural abandonment and fires. In pursuit of the imaginary of *forestry for sustainable development*, the issues of rural abandonment and fires are tackled through an organized *monte* guided by economic incentives. Institutional actors consider professionalization of the management of the *monte* as the solution to solving the problem of 'an empty rural' (*el rural vacio*) while also cultivating care for the *monte* which publics have lost, according to actors drawing on the dominant imaginary. Policy specifies the strengthening of industry-science-communities collaboration and the increased professionalization of commons communities – through for example the submission of yearly paperwork specifying who is on the managing board, which commoners are present during yearly assemblies, having financial records up to date, and so on as creating opportunities for people to 'stay in the rural' and care for the *monte*. When communities do not comply with such requirements, the management of their *monte* can be transferred to third parties who are considered to be adequately professional (Xunta de Galicia, 2021). Similarly, economists writing about the Galician *monte*, like Bastida et al (2021) note the need for professionalization in managing the *monte* when they write "our results reveal a set of inefficiencies that can jeopardize common forest opportunities to become a sustainable economic activity, such as underqualified management, a low level of interest and commitment among community members, and excessive focus on logging" (p. 1). The lack of professionalization and lack of interest in participating in said professional management of the *monte* is sought to be reversed through economic incentives in line with the State forestry imaginary of *forestry for sustainable development* and effectively (re)producing neoliberal logics in the *monte*.

The institutional imaginary that considers care to be cultivated through economic incentives fits within the global political economic and cultural environment that uncritically accepts commodification processes and naturalizes global market values (Martin-Ortega et al., 2023; Smessaert et al., 2020; Sullivan, 2006a). The strengthening of industrial forestry and ties to existing industries are imagined to yield economic benefits that will ensure good organization of the *monte* and as does neoliberalism, such developments are imagined to provide (business) opportunity for all, thus protecting the *monte* through investment and consumption and framing any problems as opportunities for further economic growth. As is characteristic to neoliberal solutions in nature conservation, these tend to be proposed as "win-win-win-win-win-win-win" for all involved; ranging from private businesses to local communities to NGOs and of course the environment (or the *monte*) (Igoe & Brockington, 2007, p. 435). These different parties are incentivized to best manage nature thanks to its translation into monetary value, as Sullivan (2013) cites various nature conservation NGOs and environmental

economists who are optimistic about accruing financial value through the pricing of environmental externalities, arguing that such pricing makes their management more beneficial for all.

Institutional actors in Galicia similarly applaud the creation of a voluntary carbon market, which is set to be launched at the start of 2026, enabling companies, organizations, and citizens to buy and sell carbon credits through an electronic system – making the fight against climate change an opportunity for economic growth and prosperity. Such schemes are made more prominent through "dramatic, technologically mediated and circulated performances" (Sullivan, 2013, p. 202) to describe the environmental crisis, driving urgent action through financial investment into climate change action. Such dramatic performances lead to common statements like what Karolyi & Tobin-de la Puente (2023) write in their recent paper, namely that "closing the financing gap between what is currently spent and what is needed to be spent over the next 10 years to mobilize private investment to maintain ecosystem integrity and biodiversity, and the services they provide, is estimated to exceed hundreds of billions per year" (p. 231). The EU's Forestry Strategy for 2030 aims at enhancing the quantity and quality of forests and pledges to plant 3 billion additional trees by 2030 in addition to pledging 1 billion euros to increase and improve forestry globally and the Xunta's forestry plan for 2020-2040 pledges 5 billion euros to improve forests in light of global climate change and biodiversity loss.

Understanding 'what matters' in good forestry and good organization of the *monte* requires locating this endeavor within the naturalized setting of neoliberalism. Framings of the biodiversity crisis, conservation, and forestry are derived from and conducive of a global "modern, and currently neoliberal, episteme" (Sullivan, 2006, p. 109) The dominant framings of nature, forests, and the problems of the *monte* as described earlier can be read in relation to neoliberal understandings of the world that shape solutions according to the institutional imaginary of *forestry for sustainable development*. Political ecologists have shown how such framings, based on technocratic, western knowledge-ways erode local knowledge and practices, culminating in epistemicide (de Sousa Santos, 2015) or epistemic injustice (Fricker, 2007) as the gross devaluation of different ways of knowing in favor of dominant, authoritative, western knowledge-ways. Yet this theoretical underpinning to understanding a better future for the Galician *monte* seemingly forecloses how such a future will look; inherently, and unwaveringly neoliberal at the expense of local knowledge-ways.

Approaching the creation of better futures for and through good governance of the Galician *monte* through the lens of sociotechnical imaginaries loosens the prophetic grip of neoliberalism as an explanatory and predictive factor to instead consider negotiation and diversity. While commons communities use slogans in direct opposition to the Xunta's efforts to neoliberalize the governance of the *monte*, e.g. with reference to the timber oligopoly (protests November 2023) or the president of CMVMC of Mourente lamenting the way the Xunta is trying to make the commons community function like a business, neoliberalism is not the endpoint of the analysis. By attending to the way knowledge-ways, practices, and imaginaries interact and follow a historical trajectory, the process of neoliberalizing the Galician *monte* is loosened in several ways.

Different ways of knowing the *monte* circulate within communities and are drawn upon in parallel. By examining these ways of knowing in light of imaginaries and their historical trajectories, action in the *monte* becomes meaningfully situated. Commons communities like Mourente discursively employ meanings developed in function of the institutional imaginary of *forestry for sustainable development*, for example, referring to the *monte* as the 'lungs of the city of Pontevedra' and readily listing ecosystem services the *monte* provides the city, like fresh air and clean water, to require financial compensation,

or certifying the carbon captured by their new plantations. Yet through ethnographic engagement with commoners it becomes clear that this is not the sole knowledge-way through which commoners know or construct their *monte*, instead family histories and memories are also drawn upon to imagine the *monte* and inform practices. Commoners very much feel connected to the *monte* and consider it 'theirs' to be protected and cared for – also against unknowledgeable urban actors. As opposed to knowledge-ways that construct nature conservation in a neoliberal way, like Sullivan's (2006) commentary on how the construction of biodiversity crisis relies on globalized environmental knowledge both in community-based conservation and the so-called 'fines and fences' conservation or the aforementioned dramatic accounts of the costs of biodiversity loss and restoration, the way commoners know the problems of the *monte* and its nature are based on scientific knowledge and embodied, experiential knowledge. In this sense, the way the problems of the *monte* are known and the associated solutions are noticeably different from those derived from the institutional imaginary of *forestry for sustainable development* while also mobilizing discourse, like ecosystem services, that are developed in pursuit of this imaginary. Bauman (1998) refers to the "the discomfort of localized existence" (p. 2-3) to note the discrepancy between the globalized world and local existence, a discomfort that implies a "breakdown in communication between the increasingly global and extraterritorial elites and the ever more 'localized' rest" (p. 3). Such accounts of knowledge and expertise mobilized in function of neoliberal discourse resonate with aforementioned works in political ecology, yet by mobilizing the lens of imaginaries, different practices become visible drawing on diverse knowledge-ways and it becomes clear that localized actors negotiate more 'global' imaginaries in pursuit of their own visions.

For example, commoners adopt the language of ecosystem services in accordance with the institutional imaginary of *forestry for sustainable development* which prescribes private property and industrial (sustainable) forestry as desirable for a better future in and for the *monte*. This way of knowing was developed in pursuit of and leveraged by the institutional imaginary seeks to motivate an uninterested, negligent public to care for their *monte* (see section 4.3) while in the process creating opportunity for economic growth – a process of neoliberalizing nature. Yet commoners draw on family histories, sensual experience in the *monte*, memories, and so on to contend with this institutional imaginary and use the methods developed in its pursuit for their localized aims of autonomy. The continuation of subsistence activities, even if to a lesser extent than historically done and sometimes for a more ritualized purpose than necessity, like the gathering of chestnuts and mushrooms or the cutting down of sick or damaged trees to use as firewood in the winter, in addition to recreational uses like walking or being in a place that 'has so long been ours' (as a commoner tells me) contributes to a meaning more complex than ecosystem service language creators have in mind when organizing the world. While critics may perceive the way commoners adopt ecosystem service language to strategically communicate with State actors and larger society about the importance of the commons and commoning as neoliberal language seeping into spaces not yet tainted by its logics (Büscher et al., 2014) when viewed as negotiating the institutional imaginary of *forestry for sustainable development* and particularly the material manifestations of historical trajectory of institutional imaginaries, such readings change. Particularly, by noticing the physical transformation of the Galician *monte* in favor of *forestry for productive prosperity*; physical and mental transformations of the *monte* in accordance to plantationocene logics (Haraway et al., 2016) with accompanying knowledge and technology, has sought to condition new commoning practices. Within such a landscape, shaped by evolving

sociotechnical imaginaries, commons communities adopt institutional practices and knowledges in light of their own visions of the *monte*.

By engaging with the historical imaginaries that have shaped the physical and mental landscape, practices that negotiate today's institutional sociotechnical imaginary and could be read as neoliberalization of the *monte* can be better understood. In addition to adopting ecosystem service language, commons communities also use legal tactics that are derived from past interactions with the historical imaginary of *forestry for productive prosperity*. In this sense, by attending to historical negotiations of institutional imaginaries, today's actions can be understood in pursuit of alternative futures rather than simply conforming to a dominant imaginary or 'neoliberal hegemony' (Plehwe et al., 2007). To illustrate, in response to the *forestry for productive prosperity* imaginary, diverse ways of resistance were conjoined together in pursuit of local autonomy. Acts of infrapolitical resistance (Scott, 1990) had been used during the Franco dictatorship, like symbolic land occupations to keep common lands out of the hands of local elites or continued use of the commons or secretly appropriating common lands as private lands so it would stay out of the hands of the regime. These acts of resistance can be understood in light of an imaginary of local autonomy which further inspired the organized acts of resistance against the AP-9 highway and the movement for legal recognition of the commons. The resistance movement leveraged knowledge developed in pursuit of the institutional imaginary, creating maps of land-uses, calculating economic losses if the highway was constructed the way authorities intended it to be, working with experts to make environmental impact assessments, and fighting for legal recognition of common lands. The legal recognition of the commons in 1980 and further refinement in 1989 meant the commonly owned properties of the *monte* were made concrete, as were its properties as inalienable, imprescriptible, indivisible, and unseizable. The establishment of a law in this sense represents the crystallization of diffuse values and expectations (Jasanoff & Kim, 2015) which meant commoners' autonomy was legally recognized. Today the legal recognition of common lands, and particular their inalienable, imprescriptible, indivisible, and unseizable characteristics have enabled, primarily peri-urban, communities to oppose the (green) productivism imposed by the institutional imaginary of *sustainable development*. Particularly, communities have been able to undo historical land-grabs, like Mourente's hospital or the industrial park in the commons of Tameiga near the city of Vigo. The return of these occupied lands to commons communities has meant financial compensation, often in the form of a long-term rent, which enables (peri-urban) commons communities to be financially independent from industrial (green) production. In this sense, communities today leverage a tool of land classification derived from historical negotiations of the dominant imaginary in pursuit of local autonomy, where everyday resistance was complemented by the use of institutionally powerful means of resistance, namely property law.

While market values and property rights through the lens of *forestry for sustainable development* turn the *monte* into a resource to extract value from, commoners appropriate these orientations to the *monte* in pursuit of their own vision of local autonomy. While other ways of knowing nature are often 'othered' and thus silenced by the neoliberal episteme (Sullivan, 2006a), approaching ways of knowing through imaginaries enables their reinterpretation away from being othered or (re)producing neoliberal logics (Castree, 2008b). Legal recognition of the commons can be considered to strengthen the imagining of land-divisions, land-rights, and has led to land-disputes (e.g. see the creation of the *Plataforma Galega de Afectados por Comunidades de Montes*[13]) and in this sense strengthens the

[13] https://afectadoscomunidadesmontes.org/

institutional imaginary of *forestry for sustainable development* and its prescriptions of how to order nature and society. Yet in light of the vision of autonomy, the historical coherency of how commoners and local communities have leveraged tools and knowledges in accordance to such institutional imaginaries has changed the mental and physical landscape of the *monte* today in defiance of what an institutional imaginary prescribes. For example, another practice that communities engage in is the buying of private property to make into common land. In this way, local autonomy and community decision making are ensured for a desirable future for the *monte* as imagined by these communities, who leverage (knowledge) practices conducive of neoliberal logics and in accordance to the imaginary of *forestry for sustainable development* while combining these with different, situated, experiential ways of knowing the *monte*.

While scholarship on the neoliberalization of nature effectively demonstrates the mechanisms and framings that constitute the process of neoliberalizing nature (Castree, 2008a; Heynen & Robbins, 2005; Igoe & Brockington, 2020), looking at governance in the *monte* through the lens of imaginaries reveals the ways collective imagination shape (knowledge) practices in the *monte* which in turn loop back to strengthen imaginaries. The friction between ways of knowing associated with localized existence (Baumann, 1998) and the globalized, centralized methods that are mobilized by the institutional imaginary of what the *monte* should be could, in a sense, be analyzed through the opposing of two different interest groups, such divisions would comfortably confirm the thesis that nature (and forestry) is more and more neoliberal. Instead, through co-production, knowledge-ways are considered in relation to the creation and maintenance of an (imagined) world, where conflict in the *monte* thus becomes not just a clash of epistemic nature or livelihood strategies, but a conflict of imagined desirable futures. It thus becomes less about how market mechanisms are exerted upon local communities (Chomba et al., 2016; Poudel et al., 2015), or resisted (Asiyanbi et al., 2019; Himley, 2008), and more about what imagined futures different actor-groups pursue and how these are informed – without granting predictive power to particular (knowledge) practices as laying the solid foundations for a (neoliberal) future.

7.3 Exploring local and historical negotiations

The use of the sociotechnical imaginaries framework tends to privilege stability, coherence, and institutional anchoring, often at the expense of attending to the heterogeneous and contested ways imaginaries originate and circulate. While political ecology analyses of forestry benefit from the imaginaries framework, the challenge is to account for how imaginaries and what Hilgartner (2015) terms “vanguard visions” emerge and are reproduced across spaces and among diverse actors. Although multiple imaginaries may coexist within a single society (Jasanoff, 2015), STS scholarship has often reproduced the language of collectivity in ways that risk oversimplifying their distributed and uneven character and centering expert discourses (e.g. Jasanoff & Kim, 2013; Olbrich & Witjes, 2016; Richter et al., 2023; Wang et al., 2023), thereby marginalizing the more dispersed, plural visions articulated by non-expert actors.

Scholars consider the inclusion and exclusion of epistemic actors (individuals and groups recognized as legitimate producers of knowledge) as crucial for shaping and legitimizing dominant imaginaries. Scientific and policy institutions are considered as often privileging certain forms of expertise (e.g., Western science, technocratic planning) while marginalizing others, such as indigenous knowledge, feminist science, or local experiential know-how (Jasanoff, 2005; Scott, 1998). Beyond a mere way of exerting power over populations, Jasanoff (2005) considers how credibility of state policy relies on

citizens' willingness to accept the knowledge claims and demonstrations of effectiveness presented by the state. This acceptability relies on the way authoritative knowledge fits within public ways of knowing, with Jasanoff (2005) using the term 'civic epistemology' to define culturally specific, historically and politically grounded, public ways of knowing that assess and inform the way knowledge claims stemming from authorities are interpreted. She considers these institutionalized practices as tacit knowledge-ways through which claims to order social lives are assessed and in turn legitimized or rejected. Through the notion of civic epistemologies, Jasanoff (2005) has contended with how public reasoning weaves together elements such as historical memory, uncertainty, distrust of authority, moral concerns, and affective responses to evaluate science and technology, and institutional claims on the basis of these evidences.

Jasanoff (2005) uses the example of British Minister of Agriculture, John Gummer, who wanted to convince the British public that British beef was safe to eat – amidst worries about BSE or 'mad cow disease' – by getting his four-year-old daughter to eat a hamburger while being broadcasted on national television. This act relied on embodied notions of trust (a father would only feed his daughter something safe to eat) and also sought to tap into the British public's commitment to empirical proofs. In this sense, civic epistemology considers a seemingly 'downward' mobility of truth claims, where the State conveys their truth claim by tapping into what they consider the public's way of assessing said claims. Yet, the acceptance of this truth claim was hampered as the British Minister had not adequately considered the way the British public assessed truth claims, or their civic epistemologies, and the media stunt ended in failure. In the case of the Galician *monte*, the Galician government in alignment with the institutional imaginary of *forestry for sustainable development* actively constructs an uncaring public that needs to be incentivized economically to care for the *monte*, with the *monte* being constructed as a resource provider. While communities partially, and arguably strategically, adopt certain knowledge-practices in accordance to this dominant imaginary, they also critically examine truth claims and contribute to their construction. For example, solutions to the problem of rural abandonment and fires, as adhering to the dominant imaginary, suggest private ownership, economic opportunities, and strengthened links to industry – to name a few, as solutions. Communities working towards their imaginary of a better *monte*, like through the vanguard vision of *destruction as care*, redefine the way truth claims are known in accordance to the historical development of an institutional imaginary and ways of knowing conducive of a different view of the monte.

In this sense, while Jasanoff (2007) notes how civic epistemologies are vital to understand how scientific 'facts' are known and validated by publics, my study shows how such understandings are conditioned by the way these groups have been shaped over time in connection to evolving State action. Publics, may they be *brigadistas* or *comunidades de montes* like Mourente, are not static recipients of scientific knowledge to validate through civic epistemologies, instead knowledge is negotiated through knowledge-practices that are shaped temporally and spatially. To illustrate, the vanguard vision of *destruction as care* deals with issues of fires and rural abandonment, as does the institutional imaginary of *forestry for sustainable development*, yet the way these issues are known and the concomitant solutions that develop in light of such imaginaries are meaningfully different. The vanguard vision of *destruction as care* considers trees and plants to be friends and enemies, actively forging emotional attachment to these nonhumans and in this sense 'knowing' them in a more embodied way than scientific knowledge does – even if ecosystem service discourse has begun to consider the 'social value' of the *monte*. Furthermore, the embodied manner of engaging with these trees, through the various methods of destruction, strengthens the antagonism to these trees inherent

to the vanguard vision that, when negotiating the institutional imaginary of *forestry for sustainable development*, thus conditions how knowledge-claims around economic necessity or rural development through better *monte*-industry chains are interpreted. In this sense, such actors groups do not just negotiate the knowledge 'received' from and developed in function of an institutional imaginary, but instead they develop their own visions in function of their knowledge-ways and in accordance develop their own practices to attain a better future. In the case of the *Brigadas Deseucaliptizadoras* the practices developed are those of destruction, reinventing 'traditional' work-ways, and mutual aid.

In addition to the situated, embodied negotiation of an institutional imaginary derived from different knowledge-practices, the historical trajectory of imaginaries also factors into the development of a vanguard vision. Hilgartner (2015) has framed vanguard visions as using vocabularies and practices given and transmitted from the past, rather than developed under self-selected circumstances. My work with the commons community in Mourente showed how commoners reproduce ecosystem service language in pursuit of autonomy from the State. Yet my engagement with the vanguard vision of *destruction as care* adds a new dimension to considering temporality in work on sociotechnical imaginaries, namely the way actors respond to changes in the landscape derived from the pursuit of historical dominant imaginaries. The historical contingency that Hilgartner (2015) noted in reference to linguistic and practice capacities in this sense extends to the way practices, in accordance to a vanguard vision, are imagined as reversing historical practices in accordance with past imaginaries. Considering the contingency of the evolution of the *monte* on historical imaginaries not only sheds light on how actions and vocabulary today are prefigured by the past, but also how actions today seek to reconfigure the physical and symbolic repercussions of the pursuit of past imaginaries to bring new futures into being. In this sense, vanguards and their visions can be better understood beyond just 'using' tools developed in pursuit of dominant imaginaries but as actively opposing these historical imaginaries and their repercussions, in favor of a vanguard vision and its associated (knowledge) practices and concomitant ordering of the natural and social world.

My work here resonates with Jasanoff (2007) and similar work (e.g. Miller, 2008) on the components of civic epistemologies, widening the notion to consider that truth claims, by the State and affiliated scientific actors, are not only negotiated by civil actors (like commons communities and activists), but these actors actually construct their own truth claims based on their knowledge-ways, giving rise to and reflected in practices. The differences in how actors pursue a desirable *monte*, and how they respond to challenges such as abandonment and fire, can be productively analyzed through the imaginaries that orient their practices and the epistemic resources that sustain those imaginaries. As Jasanoff (2005) has emphasized, knowledge-ways emerge through practice rather than codified rules, and their contours become visible through comparative analysis across groups. However, my work suggests more than a testing of divergent knowledge-ways: it points to the co-existence and ongoing negotiation of multiple (historical) visions and imaginaries that actively re-inscribe material landscapes. Such an approach enriches theoretical understandings of commoning in the Galician *monte* by foregrounding how non-expert spaces also articulate and enact sociotechnical visions. Attending to these imaginaries and vanguard visions moves beyond coherent, unified imaginaries and negotiation through civic epistemologies, insisting instead on the legitimacy of situated, community-based visions as constitutive of alternative future-making.

7.4 (De)Limitations and avenues for future research

7.4.1 From limitations to delimitations

My research into imaginaries, or shared visions of futures attainable through particular ordering of the Galician *monte*, has relied on theoretical, methodological, and operational choices that can be perceived as limitations. Within qualitative research, limitations like the non-generalizability of findings, the subjectiveness of the researcher as influencing results, the ambiguity of the research, and general lack of rigor are often noted (Queirós et al., 2017) and concluding sections of such research endeavors are dedicated to reflecting on these limitations. Such approaches are grounded in positivist research paradigms, which seek to explain 'the world' as it 'is'; valuing notions of objectivity, replicability, validity, and reliability (Straub et al., 2004). Limitations then often point to a lack of data and the danger of interpretive bias (Ochieng, 2009) as this risks tainting the conclusions reached through the research, meaning they do not apply in different circumstances (in a predictable way). Positivist approaches to research hold that by reflecting upon the choices that were made and shortcomings of the research process, the discovery of causal mechanisms can be strengthened which leads to better prediction (Park et al., 2020) and, accordingly, better control of phenomena. Approaching constructivist research through a lens that seeks generalizable universal truths falls short of actually appreciating the value of research that explores the world beyond such explanatory, predictive frameworks. Instead, constructivist research considers uncertainty and how people navigate such uncertainty, make decisions, the underlying (apparently 'minority') views of the world that are obscured by approaches grounded in positivist research philosophy, yet nonetheless contribute to the shaping of politics, communities, and landscapes.

In his *How Forests Think: Toward an Anthropology Beyond the Human*, Kohn (2013) writes about his "examination of a variety of ethnographic, historical, and biological examples summoned together in an attempt to make sense of a puzzling dream I had about my relation to some of the animals of the forest and the spirit masters that control them". Engaging with spirit masters or following puzzling dreams are endeavors that are difficult to rhyme with the methodological rigor associated with good qualitative research. Indeed, when qualitative research seeks to mimic the conventions of quantitative methodologies, accuracy and researcher bias becomes a central point of contention (*are you really describing reality or just what you think it is?*), resonating strongly with positivist research quality criteria. This thesis is situated within the interpretivist/constructivist paradigm, which holds realities to be multiple and created through interactions, through shared ideas and norms (Berger & Luckmann, 1966) that are contextual and situated. There is thus no reality 'out there' to be described accurately, validly, reliably, replicable-y, and so on. Nevertheless, while studies adhering to the constructivist paradigm note their rejection of positivist criteria, it seems researchers undertaking such work have not found a way to speak about the 'value' of their research without defaulting to replicating positivist notions of credible research.

Indeed, readers of this thesis may still bring an implicitly positivist vision to this work, expecting to find definitive answers about good forestry in general or better governance in the Galician *monte* in particular. My research process has struggled with the contradiction imposed by my methodological choices – where issues like 'but, is this *really* true?' and 'but this only applies to *this particular situation*" have shed doubt upon my work. The cultural and social lens through which a researcher engages in the research process is reflected upon in ethnographic work – yet rather than accepting it as a vital part of

such research endeavors, the issue of subjectivity is often treated as a shortcoming and almost comes to degrade ethnographic work when subject to such critique. So how can constructivist research deal with such issues? How can such work be deemed credible?

Parsons (2010) examines this conundrum within constructivism by exploring what he considers a division between modern and postmodern constructivists. Postmodern constructivists, he explains, ask "if political actors are bound within certain interpretations, why should we expect academics to be any less subjective?" to argue that the very notion of social construction implies that science itself is a political, power-laden clash of interpretive agendas that inhibit saying anything 'true' about the 'real world' – resonating with interpretivist methodology. Modern constructivists, he continues, also consider social construction amongst social actors but tentatively approach the socially constructed world as something that can be understood by tracking constructs (thus potentially enabling prediction and explanation) and awareness of interpretive bias (which through such awareness can be 'solved' to create an account of how things 'really work'. Modern constructivists, in accordance to my earlier reflection, argue that through careful research designs, openly debating arguments with a wider range of people (with different views), and other measures to include plurality and reflexivity, constructive research can describe the world in an accurate, reliable, and valid way. This latter endeavor resonates with the criticisms often directed at ethnographic work, resulting in chapters on research limitations that account for research subjectivity in all ways possible so that the research can be deemed worthy. In the process of doing so, positivist research standards are strengthened at the cost of constructive research approaches that do not attempt to replicate such standards, like Parsons' (2010) postmodern constructivists.

In coherence with constructivist approaches to research I consider how human behaviors and expressions of agency are not motivated by an objective reality out there to be accurately described through my research, instead realities are what interlocutors perceive them to be. Thus, to understand social change over time (and the intention for social change), it seems less helpful to seek a stable outside reality and more productive to dive into the realities that people experience and share, reflecting particularly on how knowledge is produced and mobilized accordingly. Instead of lamenting limitations, in the following section I set out delimitations, as the contours or boundaries of my research endeavor, accounting for the situatedness of my descriptions and conclusions. Similarly, avenues for further research do not intend to make my research outcomes 'more true' but instead propose interesting themes that emerge from my research, issues I could not engage with due to time and resource constraints, but that would be meaningful, interesting, and worthy of further investigation.

7.4.2 Delimiting sociotechnical imaginaries

My endeavor to studying the Galician *monte* began with authentic curiosity as to why the Galician *monte* looks the way it does today, how its communal character has been maintained, what its problems are and what solutions are proposed by different actors, and how to make its future more just, and ecologically sound. As I engaged in conversations and started reading on the subject, it became clear that 'better', 'more just', 'ecologically sound' are anything but clear objectives – instead improving the Galician *monte* proved to be a contested space where different actors with different agendas battle for their visions of what these things mean. Rather than engaging in a who's right and who's wrong, or classic to political ecology a 'who wins and who loses' (Robbins, 2004) analysis, and having investigated the shortcomings of neoliberal natures analyses (see section 2.7), I turned to the

sociotechnical imaginaries framework to think in terms of how positive goals for the *monte*'s future are projected and what enablers underwrite such projections (Jasanoff & Kim, 2009). The theoretical delimitations I grappled with through my inquiry into imaginaries of the Galician *monte* relate mainly to establishing the contours of what an imaginary is. Here contours reflect the temporal boundaries that shape the historical analysis of ensuing imaginaries and also boundaries of where a dominant imaginary ends and a vanguard vision begins.

With regard to the temporal contours of my historical analysis, the transition from one imaginary to the other is based on the onset of significant (political) events that produce ruptures with previous cultural orientations of how to best manage the *monte*. The boundaries between the periods (the looking backward, looking forward, and looking around periods – Chapter 4) are informed by reviewing existing forestry history studies and grey literature that documents historical events. Yet the actual transitions between imaginaries are subject to my informed choice, based on significant political events. My work answers the call within STS scholarship to consider historical, evolving imaginaries instead of solely stand-alone present ones (Hendriks et al., 2025; Jasanoff & Kim, 2015), yet transitions and the potential co-existence of imaginaries at particular points in time are issues that my work stumbled upon and where choices were made. I consider how largescale political change, like the onset of authoritarian rule, is accompanied by largescale mobilization of resources and the capacity to change policies, infrastructure, and even symbolic meaning, all factors considered to drive the mobilization and stabilization of a dominant imaginary (Wittrock et al., 2021). While such factors are considered as contributing to the uptake of a sociotechnical imaginary, more attention could be placed upon the mechanisms and levers of change. My analysis makes a start at identifying different, sequential (yet overlapping) sociotechnical imaginaries, and engaging more with what marks transitions between imaginaries would enrich the framework and its application.

In relation to the previous point, the contours around an imaginary and the actors that contest and reproduce this imaginary is another point of reflection. Indeed, the simultaneous co-existence of sociotechnical imaginaries is something scholars have made reference to (Jasanoff, 2015; Mager & Katzenbach, 2021), and my analysis responds to the need to engage with a variety of actors rather than situate the analysis solely in expert realms. The theoretical shortcomings of this framework often cited by scholars is its overlooking of marginalized perspectives or non-dominant imaginaries (e.g. Hilgartner, 2015; Leonel Da Silva & Au, 2022), and my work partially salvages this by turning to vanguard visions and the inclusion of actors not considered dominant. My intention to broaden the scope of actors considered to contribute to the reproduction of sociotechnical imaginaries around the *monte* and its role in societal progress was met by engaging with commons communities and the *Brigadas Deseucaliptizadoras*. This inclusion of non-expert actors enriched my analysis to consider more sites where visions arise and imaginaries are reproduced. Yet imaginaries are fluid and flexible (Jasanoff & Kim, 2009), and their contours are established through choice (much like the transitions previously discussed). I therefore made choices about how imaginaries were reproduced, and where an imaginary ended and a vanguard vision began, motivated by the appreciation of different knowledge-ways and epistemic resources that negotiated these boundaries.

7.4.3 Delimiting the actors considered in my study

I followed meanings across sites, in accordance with multi-sited ethnography (Marcus, 1995), engaging with a variety of actors that ranged from forestry scientists to communities to policy makers and activists. In the previous section I shared some contours I drew around the temporal imaginaries and

also the boundaries between visions and imaginaries, suggesting that the way such boundaries are established are interesting avenues for future research. My engagement with a variety of actors was an important contribution to existing work on sociotechnical imaginaries, and it is also where two avenues for future research arose.

Firstly, an actor that came up now and again during my movements across sites – especially when interlocutors wanted to refer to 'the other' or communities that they found engaged in productionist, extractivist practices rather than work towards how the *monte* ought to be (according to my interlocutors). The ideal type that describes such communities is one that engages in productivity-oriented industrial forestry practices and divides the profits over the community members. Engaging with productivity-oriented common lands would provide more richness to the analysis of sociotechnical imaginaries of the Galician *monte* and particularly shed light on the types of knowledges and motivations that actors reproducing a productivist imaginary draw on, and how this relates to the imaginary of *forestry for sustainable development*. For future inquiry, case studies together with communities that follow a more productivist vision of the *monte* can be worthy to both disrupt the category of 'commons communities' as a rigid, homogeneous whole, to instead explore epistemic ways that underlie the adherence to such a vision and perhaps draw connections between seemingly disparate sites (e.g. What are similarities between *brigadistas* and commons communities that maintain largescale plantations of eucalyptus? What types of knowledges are negotiated across these sites and are leveraged in different ways? How do different vanguard visions co-exist and interact with the institutional imaginary?).

Secondly, after several interviews with activists who partook in the resistance movement in the 1970s, which culminated in legal recognition of common lands and indeed the 'return' of lands to communities, it became clear that my inquiry only scratched the surface of the wide array of stories left untold on the history of resistance in Galicia. Engagement with commoners in my case studies illustrated different strategies of resistance, ranging from and combining everyday practices of resistance with legal recognition and movement building. The empirical engagement with communities provided a much needed situated response to State forces attributable to the institutional imaginaries that organized the Galician *monte*, providing what I found various studies in forestry and community/State interactions to lack. Rather than considering an institutional imaginary to be imposed onto publics, the empirical Chapter 5 shared ways in which communities interacted, negotiated, and opposed the State's imaginary of what the *monte* should be. Some academic literature has addressed forms of resistance to state forestry politics in Galicia (e.g. Copena, 2024; Evans Pim, 2018; Sayar et al., 1997), yet the breadth of engagement is limited to a few case studies. Further ethnographic engagement with communities, recall there being 3,000 across Galicia, would provide a very meaningful counter-narrative to how the *monte* changed at the hands of the State, to consider how acts of resistance were undertaken and with what visions of the *monte*'s future. Furthermore, such a research project grapples directly with how knowledge is lost over time when oral history is not preserved (Thompson, 2017) which in the context of my research implies granting precedence to institutional and State actors' discourses in accordance to their imaginaries over contextual, localized stories. As the generation that engaged in diverse forms of resistance during the 70s (and before) reach the end of their lives now, some fifty years later, engaging seriously with these situated stories becomes an endeavor that can change the way the past of the *monte* is understood and, simultaneously, destabilize how the *monte* and its future are imagined today.

8. Conclusion

The summer of 2025 brought with it deadly fires that destroyed more than 150,000 hectares of Galician *monte* according to Copernicus, an initiative from the Joint Research Centre (JRC) and the European Commission (Veiga, 2025). As a result, thousands of residents across Galicia were evacuated from their homes, villages were razed to the ground, rural livestock holdings destroyed, and habitat for wild animals was reduced to ashes. Social unrest, disappointment, anger, and disbelief were felt across Galicia in the wake of this devastation, and on the 21st of August, thousands of people took to the streets of 26 different cities across the territory to protest against the forestry policy of the Xunta de Galicia and for 'a Galician *monte* with a future'.

In the wake of this social unrest, the president of the Xunta de Galicia, Alfonso Rueda, held a press conference on the 25th of August, where he emphasized the importance of finding those criminals responsible for starting fires, and holding them accountable to suffer the repercussions of their actions. The focus on combatting those who start fires characterizes the communication done by the Partido Popular, the party that has governed Galicia for 35 years – apart from an interruption from 2005 to 2009 – and for whom Alfonso Rueda is president. Alberto Núñez Feijóo, the president of the Partido Popular across Spain, also spreads fear of fire terrorism ('*terrorismo incendario'*) claiming that 80% of fires are intentionally started. In an article written for news website El Salto, Rodríguez (2025) finds that over the past 7 years, under the leadership of Rueda and Feijóo, the Partido Popular has spent 5,2 million euros on campaigns aimed at wildfire prevention (four media campaigns of 1,3 million euros each) in Galicia. Critics point to the opaqueness of these media deals, where the way public funds were allocated lacked all form of transparency and tenders were spent on media outlets known to be favorable to the Partido Popular. Putting aside such critiques, and returning to my work on the *forestry for sustainable development* sociotechnical imaginary (section 4.3) that I argue guides public policy regarding the Galician *monte*, such campaigns fit well with the framing of an uninterested public that needs to be incentivized to care for the *monte*.

The current institutional imaginary that guides the way the *monte* is governed considers local communities as uninterested in taking care of the *monte*. In order to get people to care and engage in active management, economic incentives are seen as the solution, with pilot projects initiated by the Xunta and associated partners. An ensemble of actors solidifies around notions defined by the institutional imaginary of *forestry for sustainable development*, with uninterested publics and pyromaniac terrorists requiring appropriate (economic) incentives to adequately care for the *monte*. Rather than uninterested and uncaring communities, my engagement in the field brought stories of care and connection to place, hindered by State bureaucracy and subsidy programs explicitly oriented towards productivity-focused industrial forestry (see Chapter 5). Examining distinctions and discrepancies between institutional imaginaries and local negotiations of imaginaries through an interactional co-productionist lens zooms out and away from the nitty-gritty to consider how knowledge-ways envelop future possibility. In this sense, the recent wave of devastating fires can be, and certainly are, understood in different manners, with the dominant (institutional) understanding pointing at the need for 'better management' and drawing on and legitimizing a network of actors to carry out such a task. Communities that I engaged with in my work, however, draw on various epistemic resources to negotiate such institutional imaginaries – often balancing formal scientific knowledge and experience – to develop alternative responses to the crises in the *monte*.

Existing analyses of the governance of the Galician *monte* point primarily to the need for more professional and improved management to extract more (diverse) value from the *monte* (Alló & Loureiro, 2016; Bastida et al., 2021; Lana & Iriarte-Goñi, 2015). Through my analysis, such proposals are contextualized within historically contingent imaginaries and through engagement with various actors, thus loosening such recommendations to instead consider diverse visions of the *monte* and different knowledge-ways at their bases. Rather than focusing on how the state imposes predetermined environmental behaviors, the idiom of co-production has enabled an examination of how authoritative environmental knowledge and political interests have evolved together, shaping governance, livelihoods, and environmental management. As Jasanoff (2004) writes, "society can be unproblematically conceptualized as composed of interest groups with clearly articulated (exogenous) positions and preferences [...] newer work recognizes the inadequacy of interests as a primary explanatory category" (p. 20). Through co-production the ways in which different actors negotiate dominant worldviews – often analyzed as excluding alternative perspectives on environmental change and citizenship in favor of finding resonance with neoliberal nature prescriptions – opens up space for alternative futures to unfold. By emphasizing the mutual legitimation of knowledge and social structures, my work has explored how forestry is imagined across various historical periods, not just as a technical solution but also an instrument of social ordering, raising critical questions about whose knowledge and interests are validated or marginalized in environmental governance in the *monte*.

In this sense, my work has brought in the 'missing masses', not by positioning rural communities as being overpowered by powerful state forestry actors (Leipold, 2014; Winkel, 2012) or neoliberal forces (Büscher et al., 2014b; Holmes & Cavanagh, 2016; Igoe & Brockington, 2020; Sullivan, 2006a), but by considering the ways negotiation is imagined, communicated, and the overarching way understandings of the environment and citizenship have co-evolved over time. This endeavor has had to deal with the tendency of institutionally stabilized imaginaries of the *monte* not only to orient collective action but also to shape the production of academic knowledge; often discrediting accounts from local commons or commoners as merely subjective, partial, or compromised. Rather than casting doubt on local accounts, the framework of sociotechnical imaginaries offers a conceptual lens through which to reframe such seemingly marginal accounts. By situating meaning-making within specific places and historical trajectories, this perspective allows practices that might otherwise appear minor, futile, or 'meaningless' to be recognized. In doing so, it opens space for understanding social and ecological change beyond the narrow interpretive boundaries imposed by the dominant imaginary. As such, local communities are able to regain the agency that many analyses (inadvertently) take away from them. The complex ways in which imaginaries and epistemic capacities interact with each other shape how particular phenomena motivate interventions into the Galician monte (e.g. fire or abandonment) and how particular actors (e.g. eucalyptus) are constructed within the pursuit of different imaginaries and simultaneously negotiated through different epistemic capacities. Thinking through interactional co-production has revealed how knowledge about the world originates and gains traction, where some comes to be recognized as valid over others. Examining how such knowledge is negotiated and legitimized by different actors shows how knowledge (re-)produced in different (e.g. minority) sites often leads to distinct forms of action antithetical to those that accord to institutional imaginaries.

What becomes evident is that solutions developed within institutions drawing on the dominant imaginary of *forestry for sustainable development* do not meaningfully attend to those solutions stemming from other epistemic capacities and in pursuit of other visions. An array of institutional and expert actors has coalesced in function of the imaginary of *forestry for sustainable development* that

frames forest fires as the result of negligence, malicious intent, carelessness. This framing reinforces the imaginary of a disengaged public that must be incentivized (economically) into responsible environmental behavior. This in turn normalizes an economistic, extractivist vision of the *monte*, obscuring alternative practices like communal grazing that historically mitigated fire risks by reducing combustible material during the dry summer months, nowadays made more difficult due to bureaucratic barriers (which are motivated by imagining of a 'more organized' *monte*). Through the privileging of certain expert knowledges and the marginalization of others, this assemblage of actors legitimizes specific epistemologies and governance practices, shaping both the organization of society and its relationship with nature in accordance.

We find ourselves at a point of inflection that could alter the future trajectory of the Galician *monte*. The existential threat that the current management of the *monte* became during the summer of 2025, the resulting social uprising and subsequent waves of protests mean this could be a defining moment for the future of the Galician *monte*. The findings in my study tentatively suggest that any effort to improve the *monte* must begin with a critical examination of the knowledge claims and knowledge-ways that underpin proposed solutions. This involves interrogating the epistemological foundations through which interventions into the *monte* are motivated, including the way they contribute to and are mobilized by imaginaries of ecological systems, community practices, and the role of the State in attaining desirable futures for an through adequate governance of the *monte*. Through such scrutiny, interventions into the *monte* are understood in relation to dominant imaginaries without delegitimizing alternative (knowledge) practices, thus shaking up the present and future of the Galician *monte*.

We shall not cease from exploration
And the end of all our exploring
Will be to arrive where we started
And know the place for the first time.
Through the unknown, remembered gate
When the last of earth left to discover
Is that which was the beginning;
At the source of the longest river
The voice of the hidden waterfall
And the children in the apple-tree
Not known, because not looked for
But heard, half-heard, in the stillness
Between two waves of the sea.

T.S. Eliot
1942

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10. Annex 1: *Meritos*

Publications:

Keurhorst, N. (2023). *In search of both vision and strategy for degrowth.* Degrowth Journal, 1. https://doi.org/10.36399/Degrowth.001.01.15

Medema, K., Gatejel, A., Keurhorst, N. M., Diaz, M. B., Duncan, J. A. B., Morrow, O., & Sovova, L. (2024). *Food Sharing Governance Landscape Analysis in CULTIVATE hub locations: Utrecht*. Wageningen University & Research.

Pansera, Lloveras, Robra, Suarez-Eiroa, Schramm, Greaves, Fortuny-Sicart, Becker, Keurhorst, & Bergamo. (2024). Critiques of Growth: An introduction. University of Vigo. https://www.investigo.biblioteca.uvigo.es/xmlui/bitstream/handle/11093/8116/2024_pansera_cr%20itiques_growth.pdf?sequence=14&isAllowed=y

Submitted:

Keurhorst, N., Doezema, T., Schramm, E. (2025). Destruction as care: a vanguard vision of more-than-human flourishing in the Galician monte. *Environment and Planning E: Nature and Space*.

Research visits:

Research fellow at Rural Sociology group at Wageningen University from March 21, 2023 until April 21, 2023.

Conferences and presentations:

- (Presentation) *Commoning through destruction: the case of the Galician monte and the Brigadas Deseucaliptizadoras (2023)* on panel T1. S1 at SSE Commons Conference at the Instituto Universitário de Lisboa (Iscte) in Lisbon, Portugal (2023).
- (Presentation) *Shaking up the urban-rural binary: Exploring commoning practices and imaginaries in the peri-urban monte in Mourente, Pontevedra (Galicia)* at the RN38 Mid-Term Conference of the European Sociological Association, "Sustainability, places and social justice: Enabling wellbeing in rural areas across Europe", at the Public University of Navarra in Pamplona, Spain (2024).
- (Presentation) *Exploring environmental governance logics in the historical commons in Galicia* in panel 'SS08 II: II Neoliberal nature: commodification, plural values and governing of nature in the Capitalocene' at the ESEE-Degrowth 2024 International Conference on June 19th (2024).
- (Co-organizer) *PhD Symposium* at the ESEE-Degrowth 2024 International Conference on June 17th (2024).
- (Workshop participant) *Co-production workshop: A political agenda for Pontevedra*. June 26 (2024).
- (Presentation) *Two sides of the same coin: exploring destruction and creation for biodiverse landscapes* in session 42: Co-creative approaches (learning spaces) for (agro-)biodiversity-positive and socially just transformative changes at STS Conference at Graz University of Technology (2025).
- (Honorarium, presentation) *Destruction as Care: Imaginaries of More-Than-Human Flourishing in the Galician Monte* at the Revaluing Care series at Duke University (USA) on January 17th (2025).