Producing expertise: the Intergovernmental Science-Policy Platform on Biodiversity & Ecosystem Services’ socialisation of young scholars

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ABSTRACT

Expert organisations, such as the Intergovernmental Science-Policy Platform on Biodiversity & Ecosystem Services (IPBES), have become increasingly important in global, regional, and local efforts to manage current environmental challenges. As producers of environmental knowledge assessments, these expert organisations are epistemic authorities in their field of expertise. To achieve and maintain epistemic authority, expert organisations constantly need to reproduce and develop their expertise. By using the first cohort of IPBES’s fellowship program as a case study, the current paper examines the production of expertise and the socialisation of new experts into expert organisations. The paper also examines the importance of these socialisation processes in the institutionalisation of expert organisations. By analyzing interviews, observations, and documents, the current study explores the expected goals, the performance, and the results of the socialisation. The study shows how the fellows learned and acquired new roles and norms. The study also shows that whoever controls the socialisation process also control the production of expertise and the institutionalisation of the expert organisation.

1. Introduction

Expert organisations, such as the Intergovernmental Science-Policy Platform on Biodiversity & Ecosystem Services (IPBES), have become increasingly important in global, regional, and local efforts to manage current environmental challenges. As producers of environmental knowledge assessments, these expert organisations are epistemic authorities in their field of expertise. As such, these organisations are dependent on being recognised as legitimate holders and providers of the most credible and relevant expert knowledge (Connelly 2010; Leino and Peltomaa 2012; Turnhout et al. 2015; Arpin et al. 2016).

To achieve and maintain epistemic authority, expert organisations need to constantly reproduce and develop their expertise; this is especially true in cases, such as the IPBES, when the organisation does not have in-house experts to provide stability and continuity. Instead, often
expert organisations relies on temporary experts to execute the organisation's work. Because of the institutionalised temporality, identifying, recruiting, and producing expertise are central functions in these organisations. On an ongoing basis, new researchers are socialised and integrated into the organisation. In this process, the new researcher needs to get an awareness of the organisation's epistemic perspective, and social and methodological practices to be able to contribute to the organisation's work, as well as to contribute to the concretization and institutionalisation of the expert organisation as a social institution. With the aim to elaborate on the knowledge of these social processes, this current study focuses on IPBES's reproduction of expertise and the institutionalisation of IPBES as an expert organisation.

As a new expert organisation, established in 2012, IPBES is a good example of an expert organisation that relies on voluntary work by experts from all around the world, including experts on science, social science, indigenous knowledge, and local knowledge. In IPBES, these experts contribute their time and knowledge to gather and assess information on biodiversity and ecosystem services, enable their findings to be communicated and used to facilitate well-informed policy decisions. Even though IPBES is a formal institution with a clear delineation of responsibility between the member states and the organisation's different bodies, IPBES is also, in part, a network of experts.

In 2015, the IPBES initiated a fellowship program. This fellowship explicitly aimed to integrate young scholars into the IPBES's four regional assessments on biodiversity and ecosystem services, and the thematic assessment on land degradation and restoration. Except for these fellows, the assessments were executed by senior experts acting in the roles of Coordinating Lead Authors (CLA), Lead Authors (CLA), or Review editors (see IPBES 2013a; Annex I, for description of tasks and responsibilities). The goal of the fellowship program was to expand over time to eventually 'create a pool of competent professionals able to carry forward the Platform agenda' (IPBES 2015a, Appendix), thereby strengthening IPBES's capacity and knowledge foundation.

As a result of sometimes passing as an expert and sometimes not passing as such, these young scholars have a unique insight into the expert role of IPBES. Being new to the organisation, the young scholars are able to contribute fresh eyes and new ideas to IPBES. However, because they are just beginning their careers, these young scholars have limited experiences to draw from; this may make them less critical and more open to be influenced by the organisation's understanding of what knowledge is important (cf. Hooghe 2005). Thus, these young scholars are situated at crossroads of unique challenges of what it means to be an expert in an expert organisation.

By studying the first cohort of IPBES's fellowship program, the current paper aims to further the understanding of production of expertise and socialisation of new experts in expert organisations, as well as to the understanding of the importance of these socialisation processes in the institutionalisation of expert organisations. The analysis will be guided by three main research questions: (i) What do IPBES and the young scholars expect from the socialisation? (ii) With regard to the formal intentions of the program and the personal experiences of the fellows, how is the socialisation performed? (iii) With regard to the fellows’ experience of acquired norms, identities, and social memberships, what are the outcomes of the socialisation at the midpoint of the fellowship program?

The current paper is organised into six sections, including this introduction. The second section describes IPBES, its objectives, and the fellowship program. The third section presents the theoretical framework, drawing from theories on meta-organisations, socialisation in
academia, and socialisation in international organisations. The fourth section presents the empirical material (e.g. interviews, observations, documents) and the methods used in the study. The fifth section reports the analyses of the gathered materials. The sixth section concludes by discussing the importance of socialisation for the reproduction of expertise and the institutionalisation of organisations.

2. IPBES and the fellowship program

In 2012, IPBES was established to gather, assess, and communicate expert knowledge on biodiversity and ecosystem services. Rather than actively conducting any research, IPBES produces policy-relevant knowledge by using knowledge produced by other organisations. The organisation's objective is ‘to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development’ (UNEP 2012, p. 10). IPBES also aims to influence local and global policy discussions and to facilitate well-informed decisions by ‘provid[ing] policy relevant information, but not policy-prescriptive advice’ (IPBES 2016a).

IPBES has been described as a second version of the Intergovernmental Panel on Climate Change (IPCC), due to the latter’s influence on the former (Granjou et al. 2013; Díaz et al. 2015b). However, besides sharing IPCC’s objective of doing environmental knowledge assessments, IPBES differs from IPCC in two important ways. First, IPBES has a unique objective to synthesise different forms of knowledge (e.g. scientific knowledge, indigenous knowledge, local knowledge). Second, IPBES has a strong focus on capacity building – that is, working to enhance both conceptualization and methodology with regard to biodiversity and ecosystem services at a national, regional and global level (Vadrot 2014). Through its work, IPBES aims to complement existing institutions on biodiversity, such as the Convention on Biological Diversity (CBD), the CBD’s Conference of the Parties (COP) and Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), and the United Nations Environment Programme (UNEP).

Apart from IPBES’s Plenary of member states (i.e. the organisation’s decision-making body), IPBES consists of three additional permanent bodies: the Bureau, the Multidisciplinary Expert Panel (the Expert Panel), and the Secretariat. The Bureau is responsible for the administrative and day-to-day work of IPBES (IPBES 2013b, pp. 16–38). The Expert Panel complements the Bureau by conducting the scientific and technical functions of IPBES’s work program (UNEP 2012). The Secretariat supports the Plenary, the Bureau, and the Expert Panel by preparing documents, organising meetings, facilitating communication, and managing finances (UNEP 2012).

In 2013, to guide the work of the IPBES, the Plenary decided on a first work program. The work program was to occur from 2014 to 2018 and consists of four objectives, each of which includes three to six deliverables (IPBES 2013b). The first objective of the work program concerns the need to strengthen IPBES’s capacity and knowledge foundation so the organisation can perform its key functions. The first objective includes four deliverables (IPBES 2013b). To implement these four deliverables, the Plenary established three time-bound and task-specific task forces: (i) the task force on capacity building; (ii) the task force on indigenous and local knowledge systems; and (iii) the task force on knowledge and data. The task forces are led by the Bureau and work in tandem with the Multidisciplinary Expert Panel (IPBES 2013b).
The task force on capacity building ensures that ‘capacity-building needs /…/ are matched with resources /…/ to implement the work programme’ (IPBES 2013b, Annex II). To develop the prioritised capacity-building needs, the task force started their work by, inter alia, developing a proposal for the fellowship program, exchange program, and training program. In January 2015, the proposal was presented to and adopted by IPBES at the third Plenary meeting in Bonn, Germany (IPBES 2015a). That year, the fellowship program was initiated. The first cohort of the fellowship program consisted of 33 young scholars who participated in the four regional assessments on biodiversity and ecosystem services as well as the thematic assessment on land degradation and restoration.

3. Theoretical framework

To further the understanding of the production of expertise and the socialisation of new experts in expert organisations, as well as the understanding of the importance of these socialisation processes in the institutionalisation of expert organisations, this study will use a theoretical framework which combines concepts on both socialisation and organisational form. To study the process of socialisation, the analysis will combine theories on socialisation in academia (Tierney and Rhoads 1993, 1996; Mullen and Huntinger 2007; Johannessen and Unterreiner 2010) with theories on socialisation in international organisations (Checkel 2005, 2013). To describe the organisational features of IPBES, two sets of concepts will be used in the analysis: (i) meta-organisations and member organisations (Ahrne and Brunsson 2005, 2008) and (ii) primary organisations and secondary organisations (Johnston 2005).

Looking at socialisation in academia, parallel processes are described to take place (Tierney and Rhoads 1996). Newcomers to an organisation may be introduced to that organisation in a group through collective socialisation, which allows for shared experiences of the new organisation’s social settings and expectations. Alternatively, the newcomers may be introduced to the organisation one-by-one through individual socialisation, in which the newcomer creates individual experiences with the new organisation (Tierney and Rhoads 1996).

The socialisation process often consists of both formal and informal elements (Tierney and Rhoads 1993, 1996). Formal socialisation is done through specifically organised activities that aim to introduce the newcomer to the organisation. Informal socialisation, on the other hand, is done through casual meetings during and after work hours. These formal and informal socialisation processes are most prominently done through serial socialisation, which is a relationship between the newcomer and an experienced member of the organisation (Tierney and Rhoads 1996).

Through serial socialisation, ‘formal mentorship serves the needs of the institution, whereas informal mentorship focuses on the needs of faculty’ (Johannessen and Unterreiner 2010, p. 46). Altogether, the serial socialisation process fulfills multiple career and psychosocial functions, such as sponsorship, visibility, coaching, protection, challenging assignments, role modeling, acceptance and confirmation, counseling, and friendship (Mullen and Huntinger 2007). The opposite of serial socialisation is disjunctive socialisation, in which the newcomer has no experienced members of the organisation to seek advice from (Tierney and Rhoads 1996).

Socialisation processes vary in both their structure and duration (Tierney and Rhoads 1996). During a sequential socialisation process, there are clearly defined guidelines about
what content needs to be learned. During a random socialisation process, there are no clear guidelines regarding the order or the way in which things should be done or learned. Socialisation processes also vary in to what extent they are fixed (i.e. there is a mandatory, predetermined timetable of what is to be done) or variable (i.e. there are no time limits or expected deadlines for achievements).

Finally, socialisation processes could either affirm or transform a new faculty member’s perceptions, attitudes, and beliefs. Investiture [socialisation] refers to activities that confirm what an individual learned about life in graduate school. Divestiture [socialisation] occurs when an newcomer must change in order to adapt to the culture of the organisation. (Tierney and Rhoads 1996, p. 42)

There are two successful outcomes of socialisation in international organisations: type I socialisation and type II socialisation (Checkel 2005, 2013). Type I socialisation occurs when the actor learns the appropriate roles in a specific community or organisation and how these roles are executed within the community's social norms and rules. Thus, type I socialisation is the process of learning how to play the part and how to act in a specific social context. To pass as a member of the community or organisation means one must know the social codes of conduct, whether or not they agree with the norms (Checkel 2013).

Type II socialisation occurs when the actor decides to ‘go beyond role playing’ (Checkel 2005, p. 804) and change their norms to align with the norms and rules of their community or organisation (cf. divestiture socialisation (Tierney and Rhoads 1996)). Socialisation is the process of changing the social norms and rules that guide actors both within and outside of a particular community or organisation. Becoming a member of a community or organisation through type II socialisation means an actor is ‘adopting the interests or even possibly identity of the community of which he/she is a part’ (Checkel 2013, p. 13).

However, even though the newcomer is central to the socialisation process, to fully understand these processes, both type I and type II socialisation need to be recognised as a relational process between two actors who influence one another (Garrett and Baquedano-López 2002; Checkel 2013). Socialisation is not simply one actor modeling behavior for another. Socialisation is a two-way street – an interactive process between two actors with diverse experiences, norms, and social positions (Johnston 2001; Checkel 2013). The socialisation process is a ‘mutual adaptive process between the organisation and the individual’ (Tierney and Rhoads 1993, p. 22). Therefore, to analyze and explain the different dimensions that constitute the socialisation process in knowledge-intensive institutions, it is important to understand the organisation. It is necessary to know the extent to which an organisation is a meta-organisation or an individual-based organisation and to what extent it is a primary or secondary organisation.

The concept meta-organisation (Ahrne and Brunsson 2005, 2008) describes a previously untheorized category of organisations – organisations composed of other organisations, rather than individuals. Meta-organisations function at both the national and international levels and consist of different types of member organisations, such as companies or states (Ahrne and Brunsson 2008). Due to their structure, meta-organisations differ from individual-based organisations in regard to (i) reasons for becoming a member; (ii) the organisation’s dependence on its members; (iii) how to handle conflicts within the organisation; and (iv) possibilities and challenges for organisational change (Ahrne and Brunsson 2005).

Meta-organisations have a number of objectives: (i) to help coordinate the operations of their members; (ii) to establish themselves as new, powerful actors on the organisational
stage; (iii) to create or confirm a certain identity among prospective members; and (iv) ‘to provide information to each other and thereby increase their total knowledge – through the development of joint statistics and measurement’ (Ahrne and Brunsson 2008, p. 66). The establishment of a meta-organisation can ‘create a higher degree of order in an “organisational field”’ (Ahrne and Brunsson 2008, p. 64). This order results in new relationships between the member organisations, and relationships with non-member organisations. Thus, identifying the objective of the organisation as well as understanding the relationships between the meta-organisation, its members, and external organisations are crucial to examining the socialisation processes in meta-organisations.

Four features of meta-organisations and individual-based international organisations influence the socialisation process (Johnston 2005). The first feature is whether the organisation is a member’s primary or secondary organisation. Primary organisations are more likely to involve the actor in type II socialisation, whereas secondary organisations are more likely to involve the actor in type I socialisation (Checkel 2005, 2013). International organisations most often function as secondary organisations, this since its affiliated members already are socialised and integrated in another, often nation based, (primary) organisation. In some cases the socialisation process results in a member’s changed perception of the international organisation; from being a member’s secondary affiliation, the international organisation becomes the organisation with which the person primarily identifies herself (Johnston 2005). Second, when an actor enters a new organisation, there is an increased likelihood of investiture socialisation if the secondary organisation complements the primary organisation, which is paralleled with an increased likelihood of a divestiture socialisation when the secondary organisation competes with the primary organisation. Third, under some conditions, specialisation of work and objective in the secondary organisation may distinguish it from the primary organisation, thereby creating socialisation process that offers a complementary identification with the secondary organisation’s norms and rules. Fourth, to socialise new members, the organisation needs a common objective – a ‘coherent identity with a clear linked set of normative characteristics’ (Johnston 2005, p. 1020).

In sum, examining socialisation is a reciprocal process; understanding the organisation helps us to understand the socialisation and understanding the socialisation helps us to understand how new actors impact the organisation. First, by using the concepts meta-organisation and member organisation (Ahrne and Brunsson 2005, 2008) in combination with primary organisation and secondary organisation (Johnston 2005), the study will analyze and contribute to the understanding of expert organisations’ organisational preconditions for the socialisation of new experts. Second, by using descriptive theories on multiple dimensions of socialisation in academia and international organisations (Tierney and Rhoads 1993, 1996; Checkel 2005; Johannessen and Unterreiner 2010; Checkel 2013; Mullen and Huntinger 2007), the study will analyze and further the understanding of the production of expertise and the institutionalisation of expert organisations (Table 1).

4. The study: method, materials, and analysis

The empirical material for this study consist of (i) an interview with an IPBES representative, (ii) notes from a participant observation, (iii) interviews with 12 fellows, and (iv) official documents from IPBES.
An interview with an IPBES representative who is involved in the fellowship program was conducted via Skype at the beginning of the study (October 2015). The interview focused on IPBES’s ambitions for the fellowship program, the organisation of the program, and the organisational context of the program.

In December 2015, as part of the fellowship program, IPBES held a four-day workshop in Bonn, Germany. Materials for the current study include notes from observations of participants during the last two days of the workshop. The workshop was the first time during the fellowship program that all fellows, who were otherwise separated into the four regional assessments and the thematic assessment, had the opportunity to meet each other in person. Before the workshop, the fellows had met their regional peers at the author meeting which initiated the work on their assessment. The Bonn workshop was followed by a second workshop in Bilbao, Spain, January 2017. Invited to participate at this second workshop were both the first and second fellowship cohort. The fellows in each assessment will also meet separately once more at their assessment’s final author meeting.

The interviews took place after the interview with the IPBES representative and before the interviews with the young fellows. This allowed for follow-up conversations and observations about IPBES’s ambitions for the fellowship. Conversations included talks with the previously interviewed IPBES representative, additional IPBES representatives, IPBES experts involved in the fellowship program, and the fellows. Observations were made of the workshops program and execution – both the format and content of the event. The timing of the workshop allowed for contacts to be established with the fellows before any official requests for interviews were made.

The interviews were focused on the fellows participating in the four regional assessments on biodiversity and ecosystem services, assessments which all had the same focus and chapter structure. Therefore, no fellows from the thematic assessment on land degradation and restoration participated in the interview study. Those fellows were, however, in attendance at the workshop in Bonn. Three fellows from each of the four regional assessments on biodiversity and ecosystem services were asked and agreed to participate in the interview (i.e. 12 out of 26 total fellows). The fellows were strategically selected to get a variation among

| Table 1. Theoretical framework. |

| Theoretical framework |
|------------------------|
| Concepts on socialisation |
| Socialisation in academia (Tierney and Rhoads 1993, 1996) |
| Collective – individual socialisation |
| Formal – informal socialisation |
| Serial – disjunctive socialisation |
| Sequential – random socialisation |
| Fixed – variable socialisation |
| Investiture – divestiture socialisation |
| Socialisation type I – type II |

| Concepts on organisation |
|--------------------------|
| Meta-organisations – member organisations (Ahrne and Brunsson 2008) |
| Primary – secondary organisations (Johnston 2005) |
| Primary and secondary organisations act complementary or competitively |
| Secondary organisations may, or may not, be engaged in specialisation |
| Secondary organisations may, or may not, offer alternative identification |
the respondents with respect to gender, age, level of education (MSc and PhD), and field of expertise. An interview guide was constructed to function as a structure of the topics to be addressed during the interviews. However, the order of the questions and how they were raised during the conversation were adapted to the unique evolvement of each interview. The interview questions were designed to elicit respondents’ experiences on five topics; (1) the application process, (2) the fellowship program, (3) the role as a fellow in IPBES, (4) the role as an IPBES fellow in relation to home institutions, and (5) the future. The interviews were conducted via Skype (except for two interviews conducted via telephone) between February 2016 and April 2016. At the time of their interview, each fellow was preparing to submit or had just submitted their contribution to the first draft of the assessment. Each interview lasted between 60 and 90 minutes. All interviews were audio recorded and transcribed verbatim.

To protect their anonymity, the fellows are identified by the regional assessment in which they participated rather than pseudonyms, nationality, age, or education level (cf. Declaration of Helsinki of 2008, 2008, article 24). Maintaining anonymity in this way does not prevent an honest, detailed presentation of the analysis.

Finally, the empirical materials also include official documents from IPBES. All documents are available on the IPBES website (IPBES 2016c). The documents include decisions and meeting reports from Plenary meetings, as well as working documents from the organisation.

The analysis was done in four stages (cf. Miles et al. 2014). First, each interview was holistically coded using empirically driven descriptive codes (e.g. work assignments, benefits of participating, difficulties & problems, IPBES: the organisation, support structure). Second, patterns in the codes were identified. Then, codes were grouped together into themes. Three of these themes were of interest in the current study: expected goals of socialisation, the socialisation process, and results of socialisation. Third, the interview materials for each of the three themes were reread for a deeper analysis and further coding to examine differences and variations within the material. In the fourth stage, the results from the interview coding were examined alongside the information gained from the documents. Throughout all four stages, the study’s theoretical framework was used to inform and drive the analysis.

5. Analysis

Analyzing IPBES as an organisation shows that IPBES is a specific type of meta-organisation. The members of the organisation are states; these states constitute the decision-making body. However, the organisation’s actual work and its legitimacy depend on the recruitment and efforts of individual experts (cf. Arpin et al. 2016). Thus, even though IPBES is an organisation of states, it is also an organisation of individuals. IPBES was established by states to organise their collective expertise. Individual experts are brought into IPBES through a nomination and selection process; experts are nominated by member states and stakeholders, and then they are officially selected to work together toward the organisation’s objectives. This combination of state representatives and experts is one reason that IPBES is often described as a boundary organisation that offers and facilitates a science-policy interface (Beck et al. 2014; Morin et al. 2017; cf. Guston 2001; Gustafsson and Lidskog 2017). In addition, as a consequence of using the knowledge produced by other organisations to assess and communicate current knowledge about biodiversity and ecosystem services, IPBES is also
to be understood as a secondary organisation. As a secondary organisation, IPBES complements national and international primary knowledge-producing organisations.

Through its focus on strengthening science-policy interfaces, IPBES has developed unique norms and rules that separate it from any primary organisation. Working to complement primary organisations, IPBES has adopted methodological guidelines (IPBES 2016b) and a conceptual framework (Díaz et al. 2015a, 2015b), giving the organisation an individual identity and establishing its ontological and epistemological position as an interdisciplinary organisation. IPBES’s methodology on how to do assessments is similar to procedures that have been used in other assessments, such as the IPCC and the Millennium Ecosystem Assessment. However, IPBES’s conceptual framework is unique – it aims to

provide an integrated view of the biodiversity knowledge–policy interface, stimulate new thinking, accommodate diverse human attitudes to biodiversity, and at the same time be as simple as possible to be effective and useful for the diverse array of stakeholders. (Díaz et al. 2015b, p. 2)

IPBES’s conceptual framework includes multiple knowledge systems to create a ‘common ground, to facilitate cross-disciplinary and cross-cultural understanding and interoperability, and to identify options for action’ (Díaz et al. 2015a, p. 4). Among these knowledge systems, IPBES identifies six main elements representing the link between nature and society. The framework indicatively organise the relation between both the elements and the knowledge systems. The elements are (i) nature, (ii) nature’s benefits to people, (iii) anthropogenic assets, (iv) institutions and governance systems and other indirect drivers of change, (v) direct drivers of change, and (vi) good quality of life (Díaz et al. 2015b). Intended to guide all work in IPBES, the conceptual framework offers a common, and to IPBES unique, combination of concepts and knowledge systems. IPBES’s conceptual framework results in norms and a specialisation that enables IPBES to offer experts a complementary, but sometimes competing, identity possible for experts to relate to as their primary identity.

Hereafter, the current analysis will focus on how young scholars are introduced and socialised into IPBES through the fellowship program.

5.1. Expected goals of socialisation

5.1.1. IPBES’ expectations

From the very start of the program, IPBES presented the fellowship program in a way that, in terms of this paper’s conceptual framework, showed an idea to offer a formalised and collective socialisation process. Due to close relationships between the regional and thematic assessments, this socialisation would be both fixed and sequential. Going into the fellowship program, both IPBES and the young scholars expected the program to be successful at socialising and to achieve multiple outcomes.

IPBES’s objective for the fellowship program was ‘to create a pool of competent professionals to carry forward the Platform [IPBES] agenda’ (IPBES 2015a, Appendix). This objective had three specific aims:

[1] To increase countries’ capacities to identify, study, assess, monitor and plan strategies, actions and policies related to biodiversity and ecosystem services, using internationally recognised methodologies; [2] To encourage young researchers to study in leading institutions, build and strengthen their international networks and encourage them to take part in regional assessments in the future; [3] To promote interaction between and among policy groups and experts, and within and between countries, related to priority areas of the Platform. (IPBES 2015a, Appendix)
IPBES’s objective and aims underpin the expectation that fellows will acquire new roles and norms. Fellows are expected to take on the role of an IPBES expert, to become a ‘competent professional’, by learning internationally recognised methods for assessing biodiversity and ecosystem services (see IPBES 2016b). In addition to becoming an IPBES expert, fellows are expected to take their expertise on identifying, studying, assessing, and monitoring biodiversity and ecosystem services back to their primary organisations. This will contribute to countries’ capacity to plan strategies, actions, and policies related to biodiversity and ecosystem services.

By bringing back expertise to one’s primary organisation, fellows will ‘carry forward the Platform agenda’ by spreading IPBES’s view on the interaction between nature and society. Thus, in addition to learning skills, IPBES expects fellows to acquire and work from IPBES’s specific conceptual framework (see Díaz et al. 2015a, 2015b). This conceptual framework sets ontological, epistemological, and normative preconditions for how and why to conduct assessments. By facilitating interaction between policy groups and experts, between countries, and within countries, the fellowship program aims to propound IPBES’ interdisciplinary worldview.

To meet these expectations, both type I and type II socialisation must be successful. Through type I socialisation, fellows are given the opportunity to gain the necessary skills to pass in the role of an IPBES expert. Depending on the fellow’s level of previous experience, this could mean learning completely new skills, or it could mean developing existing skills using an investiture socialisation process. Furthermore, to meet the expectation that fellows will ‘carry forward the Platform agenda’, fellows must go through type II socialisation. Fellows need to be introduced to the agenda, become familiar with it, and use it as a new ontological, epistemological, and normative tool. The fellowship program must be organised such that it offers a divestiture socialisation process.

5.1.2. The fellows’ expectations

When talking to fellows about what they felt was expected of them when entering the fellowship program, it became evident that there were no clear expectations beyond the information in the call for nomination of fellows (see IPBES 2015b). Before the fellowship program began, fellows knew that they were to attend the author meeting which initiated the assessment, and to some extent participate in the work of the assessment. However, the details of their participation were still unclear. Thus, the description of the fellowship program laid out in the call for nomination was quickly identified as lacking in information and or guidance. So, instead of a fellowship program with a formalized, collective, fixed, and sequential socialisation process, the fellows reported that their initial experiences in the fellowship program were informal, individual, and random, while still being a fixed socialisation process.

Due to this lack of detailed information, the fellows initially had very vague and generalised expectations on what they would gain or learn from the fellowship. There were two main categories of general expectations. Fellows expected to (i) learn how to manage and coordinate an assessment and (ii) learn how to communicate scientific knowledge to policy actors.

Because they were new to the assessment process, most fellows expected to learn how to conduct an assessment; these skills would enable them to execute the role of a LA. Moreover, some fellows go beyond that and expect to learn how to manage an assessment;
these skills would enable them to execute the role of a CLA. Gaining these new skills would also lead to a deeper scientific competence, as well as the ability to work with other knowledge forms.

The second main category of fellows’ expectations was to learn how to communicate scientific knowledge to policy actors. As expressed by one of the fellows, IPBES and the fellowship program are acknowledged as forums in which scientific writing meets policy discourses. One of the fellows stated:

I think it will be interesting for me to see how they come up with effective messages for governments and policy makers and also learn the language, the kind of language you have to use when you have to write these things [assessments]. (Fellow interviewed February 18, 2016, IPBES’s Regional Assessment Europe and Central Asia)

Thus, fellows expected to learn how to become effective knowledge brokers; how to pass in the role of a knowledge broker.

Overall, the fellows expected to learn new skills based on their existing knowledge (e.g. how to conduct assessments, how to synthesise different forms of knowledge), thus enabling them to take on a new role (e.g. LA, CLA, knowledge broker). In other words, the fellows anticipated an investiture socialisation process (i.e. type I socialisation). None of the fellows expected to find a new primary organisation with a new identity and new norms (i.e. divestiture socialisation, or type II socialisation); however, according to many of the fellows, this is what happened as the program has evolved.

5.2. The socialisation process

The IPBES fellowship program is centered around the work of the four regional assessments on biodiversity and ecosystem services as well as the thematic assessment on land degradation and restoration. By participating in these assessments, fellows learned what it meant to be an IPBES expert, and they learned the norms of IPBES. One IPBES representative stated:

They are taking part in the assessment from A to Z. By bringing them in from the very beginning they are taking part as authors, writing their part of a chapter … in other words participating on the same level as the lead authors. The fellows also participate in the meetings and they receive additional capacity building. We are actually organising a capacity building workshop for the young fellows now, where … we are bringing everyone together from the thematic assessment and the four regional assessments so they can learn from each other. Further down the line I think we also want to look into the opportunity of bringing them to a Plenary so that they can see how that process works. This is not set in stone yet, but we are working on it. We just want them to understand the entire assessment process, because an assessment is very different from writing an academic paper. And hopefully they will understand better the “science policy interface” including what is needed to bring knowledge from the science side to the policy side. (IPBES rep. interviewed, 30 October, 2015)\(^4\)

Since the IPBES Plenary launched the fellowship program in 2015, decisions have been ongoing regarding the design of the program, how to support the fellows in their work, and what additional activities are necessary to complement their work in the assessment. After the program began, two large decisions were made that affected the content and format of the program. First, during the author meetings between August 2015 and September 2015, IPBES decided to impose a mentorship structure. Thus, all fellows were mentored by either a CLA or an LA from their chapter. The decision should be understood as an effort to strengthen the sequential socialisation by formalizing and developing the elements of serial
socialisation within the fellowship program. During the fall of 2015, the mentorship program developed from an informal and individual program into a more detailed, formal, and collective program by developing instructions on what the mentorship should include.

Second, during the author meetings, it became clear that the fellows would benefit from meeting their peers from the different regional and thematic assessments. This would help the fellows to develop a learning network among themselves and to share lessons and reflections from their separate author meetings. Thus, in terms of the conceptual framework, the fellows would benefit from a strengthened collective socialisation. It also became apparent that the fellows needed an introduction of IPBES’s organisational objectives, directives, methodology, and conceptual framework. Thus, in terms of the theoretical framework, the fellows would gain from a strengthened sequential socialisation. To address these aspects of the fellowship, a fellowship workshop was organised to focus on the entire range of IPBES’s work. The workshop was held on 7–10 December 2015, at the United Nations University Campus in Bonn, Germany.

In sum, during the initial phase of the IPBES fellowship program, the organisation strived to develop the program through both type I and type II socialisation and by clarifying the formal structure of the program. The organisation’s actions show the need to formalize the sequential socialisation as well as the need to actualize the initial idea of the fellowship that was expressed in the call for nominations. That original idea was a program offering a formalized, collective, fixed, and sequential socialisation process that enables both type I and type II socialisation.

5.2.1. The fellows’ experience with the socialisation

When talking to the fellows about their experience with the fellowship, it became clear that the fellowship program’s initial main function was to integrate the fellows into their regional and thematic assessments. Hence, conversations with the fellows about their role and their job assignments within the fellowship often turned into conversations about their role and assignments in the assessment.

What stands out as most important in the shaping of the fellows’ roles and experiences with the fellowship was the influence of the CLAs. As coordinators and leaders of the work within the chapter, the CLAs have become de facto supervisors; thus, they have had a big influence on the fellows’ roles and their relationships with other authors involved in the assessment. The CLAs have been acting as informal mentors or role models for the fellows, providing the fellows with individual serial socialisation by defining and structuring the content to be done and learned in the fellowship and the assessment.

All fellows described their role in the assessment as acting as an author who, in collaboration with other senior Lead Authors, were responsible for writing a specific section of a specific chapter of the assessment. However, the experience of being an author varies between different levels of responsibility. Being an author could for the fellows mean (i) assisting on reference checking; (ii) having a role similar to the role of the LAs; or (iii) working together with the CLAs to coordinate the work for the chapter. Many fellows reported that as the assessment has developed, they have all been given more and more responsibility to work on and to write the assessment. Staying engaged and delivering assigned work on time leads fellows to be rewarded with more responsibility. At the same time, some of the fellows describe how a lack of engagement from some of the LAs has created difficulties and increased their personal workload when trying to complete the collective work on time.
The fellows describe the fellowship program as an individual experience with lots of individual responsibilities and tasks. The individual nature of the fellowship program, the lack of clear guidance, and changing rules for the work have led many to describe the socialisation process in ways that is to be understood as a random socialisation process. Moreover, the fellows are forced to face the experience on their own.

The fellows appreciated the idea of having a mentor during the fellowship and assessment. However, there have been mixed experiences concerning success of the mentorship. One fellow stated:

“One very important thing that is going to help me a lot is being in close contact to my chapter's CLA, who is my mentor. For he is a CLA, and he is my mentor, and I've been in contact with him [...] I expected, and am sure it's going to happen, that I will learn a lot from him; and the fact that we, as early career scientists, can learn from experience and can work closely to lots of experienced scientists or practitioners is a huge opportunity [...] My mentor is awesome and I am learning a lot from him and he's very open. And, you know, I talk to him through WhatsApp, so it's been great. (Fellow interviewed February 24, 2016, IPBES's Regional Assessment Americas)

As this excerpt shows, some fellows receive strong support from and have a functioning relationship with their mentor. Some fellows describe their mentor as someone they are able to talk to if questions about their work arise, which indicates a serial socialisation process. Other fellows report that they have no relationship or contact with their mentor, indicating disjunctive socialisation.

Fellow: I expected that the mentorship program can play a bigger role in the future. Because right now, myself and also other fellows – young fellows – they don't have much contact with their mentors.

Interviewer: How come?

Fellow: It’s currently … it’s like a formality or something that they require. Required by the secretariat. It doesn’t really work well. (Fellow interviewed March 2, 2016, IPBES's Regional Assessment Asia-Pacific)

Despite IPBES's attempt to formalize a mentorship structure and, in terms of the theoretical framework, transform a disjunctive socialisation process into a serial process, it is clear that fellows have varying experiences and socialisation processes during the fellowship program. Regardless of their personal experiences with the mentorship, all fellows appreciate the intentions of the mentorship structure; however, the fellows suggest that there is room for improvements. Presented by the fellows as one step in the right direction to formalize the mentorship structure, is the creation of guidelines and expectations regarding mentorship. In terms of the theoretical framework, this is thought to create more collective experiences, rather than varying individual experiences.

The fellows also appreciated the workshop. The workshop provided a concrete place for fellows to share their understanding and experience. Fellows also shared their knowledge about the fellowship program, the assessment process, and IPBES. The fellows’ experiences with the workshop aligned with IPBES's intentions. However, many fellows wished that the workshop had occurred earlier in the fellowship program; the workshop provided a lot of the information that fellows were missing before, during, and after the author meeting that initiated the assessment process.

The fellows stated that the workshop provided a structure for the fellowship and for the assessment process by clarifying the content and timeline. The workshop was structured around (i) talks given by multiple IPBES experts, all of who performed different functions in
the organisation, and (ii) group assignments allowing the fellows to collaborate, implementing and expanding upon their new knowledge about IPBES’s different fields of work. Having IPBES experts participate in the workshop put a face on IPBES’s work, making it visible and comprehensible. The presenters became people for fellows to consult about how to act and what to do.

As a collective experience, the workshop was an opportunity for the fellows to develop a collective identity that defined their role as fellows. The workshop also allowed the fellows who were working on the same chapter, but in different regional assessments, to meet and discuss their work—responsibilities, chapter dispositions, problems, and solutions. By providing the chance for fellows to share their experiences, the individual experiences within the fellowship program and the assessment process were transformed into collective experiences.

One of the main reasons that the workshop became a forum for collective and sequential socialisation was the engagement from members of the Technical Support Unit (TSU) for the task force on capacity building. These IPBES representatives are responsible for implementing the fellowship program. They provide support and administrative assistance at both the authors meetings and at the workshop; the members of the TSU have become key figures in the fellowship program. The members of the TSU joined other IPBES experts in becoming important informal mentors. The TSU members helped fellows to navigate the complexities of the fellowship program, the assessment process, and IPBES. In their role as social facilitators, the members of the TSU have become one of the main reasons for the program’s evolution into a socialisation process with collective experiences and a shared identity.

In sum, there is often an unclear relationship between the fellowship and the assessment process, making it unclear who is expecting something from the fellow, and who is designing the content of the fellowship program. This, in turn, raises a question: to what extent is the fellowship program seen as a complement to the assessment that enables the fellows to learn something more than assessment skills? The workshop and the role of the TSU members are two aspects of the fellowship that make it a complement to the assessment. Together, these two aspects have managed to broaden the fellows’ experiences from participating in the assessment as individuals to be a part of a specific group of people with a unique position within IPBES.

Initially, there were no clear guidelines or expectations regarding work assignments and roles for fellows and mentors. The CLAs became responsible for developing and defining the fellowship; they were given freedom to shape the program as they saw fit. Thus, to a large extent, the fellowship has relied on informal and individual socialisation. The fellowship’s emphasis on informal socialisation gives the fellows the opportunity to decide what to gain from the experience, what the outcome of the socialisation should be, whether to learn a role, or whether to follow new norms.

### 5.3. Outcomes of the socialisation

Halfway through the fellowship program, the fellows highlight three main benefits of their participation. First, the fellowship program has allowed them to create a network that would have taken them years to establish otherwise. Second, they have gained great experience to list on their résumé, showing that they are capable and responsible enough to participate
in advanced international assessments. Third, they have gained valuable experiences and knowledge – knowledge of IPBES as an organisation, general expert knowledge, and knowledge of how to conduct assessments. The fellows may use these experiences and benefits to reach their career goals, both inside and outside of IPBES.

Even at the midway point in the program, fellows have already enhanced their potential for career development outside of IPBES. Some of the fellows interviewed for the current study have expressed that the social networks and the merits of the assessments and the program have led to new collaborations outside of IPBES. Some fellows emphasise the fact that many of their newly gained skills are transferrable skills that will be important when applying for other jobs or taking on new assignments.

Moreover, their new skills have improved their chances of staying with IPBES. The fellows have improved their chances of returning to IPBES as an expert in future assessments. The program has also prepared fellows to stay with the organisation to work on the day-to-day operations, in the secretariat, as a TSU member, or in other science-policy interface organisations. This is due to the fellows adoption of IPBES’s norms and identity. As one fellow phrased it, the fellowship helped them ‘to become an IPBES person’:

My supervisor asked me if I am now an IPBES person or whatever. I mean, I would be happy to work, if not just with IPBES, but with other science-policy interface platforms or organisations. I mean, either directly or indirectly, I would definitely want to because I share in this value. I mean, these values of having [...] an interdisciplinary; and also scientists and young scientists working together; and bringing scientific knowledge to the whole world; and to communicate something of interest. (Fellow interviewed February 25, 2016, IPBES’s Regional Assessment Africa)

The fellows’ description of the outcomes from the fellowship program indicate they have taken part in both type I and type II socialisation processes. Type I socialisation processes have allowed them to acquire a role and gain skills that enable them to be IPBES experts and knowledge brokers. These skills are a benefit for their career and are transferrable to other work settings and academic situations. Type II socialisation processes have allowed the fellows to feel like an integrated member of the IPBES. They have adopted the identity of being an ‘IPBES person’ who aims to work in future assessments or in the IPBES’s support structure.

6. Concluding discussion

The current study has revealed IPBES’s ambition with its fellowship program to, in terms of this paper’s theoretical framework, offer a formalized, collective, fixed, and sequential socialisation process, to build capacity, and to reproduce expertise. However, the current study has also shown that the fellows’ initial experiences with the fellowship have been as an informal, individual, and random, while still being a fixed socialisation process. The current study has further shown how IPBES has strived, and to some extent succeeded, to address the discrepancy between their intentions and the fellows’ experiences by (i) clarifying the formal structure of the program; (ii) enabling collective experiences; and (iii) strengthening the sequential socialisation within the program. As a result of their efforts, IPBES has managed to create a collective identity as well as formal conditions for sequential socialisation that together center the fellowship program which, at the midpoint of the program’s first cohort, still over all is characterised by informal and individual socialisation. The study also examines
and shows how participation in the program has given the fellows (i) a large professional network; (ii) a great merit for their résumé; and (iii) valuable experiences and knowledge.

Despite an initial mismatch between IPBES’s intentions and the fellows’ experiences, the analysis of the fellowship’s outcomes indicate that the fellows, at the midpoint of the program, have participated in both type I and type II socialisation. All fellows have, through type I socialisation, to some degree acquired the role as an LA, and some of them has also been able to gain an insight into the role of being a CLA. Many of the fellows has also, through type II socialisation, gained a new identity of being an IPBES person, loyal to the organisation, with a specific role within the organisation and a self-imposed responsibility to represent IPBES outside the organisation. However, the fellows’ experiences and IPBES’s actions to improve the program have also shown how the fellowship program, at the midpoint of the first cohort, have led to diverse content and outcomes in the program. In other words, even when a socialisation process succeeds in introducing new roles or identities, as in the case of IPBES, socialisation processes which are dominated by informal and individual characteristics risk to differ in content between individuals. To what extent, and in what form, the individual fellow in IPBES’s fellowship program acquired new roles and or adopted a new identity was the result of a combination of the influence of formal and informal mentors, IPBES’s management of the program, and the fellow’s one interest.

The analysis has shown how IPBES’s fellowship program is based on two implicit ideas about socialisation. The first implicit idea is that socialisation is done through interpersonal relations. The second implicit idea is that socialisation through interpersonal relations generates, what could be described as, a sequential socialisation that classifies as both type I and type II socialisation. Relatedly, the analysis has showed how IPBES is confident that their senior experts have a general knowledge about what fellows need to learn and that this leads the senior experts to be competent with regard to be initiators of the socialisation process. However, this confidence in the individual senior experts have been shown to result in IPBES ceding control of the program’s content to the CLAs and the fellows. This, in turn, led to the diverse content and outcomes of the program. Relying on individual senior experts to form the socialisation process in the fellowship program gave these experts the power to decide what needs to be learned to become a LA or a CLA, and what norms that are representative of IPBES. It is in relation to this situation that IPBES’s efforts to formalize and concretize the fellowship program’s content is to be understood. The effort to center the program by creating a collective identity and formal conditions for sequential socialisation is an effort to control what is to be learned about IPBES, to manage the role of the IPBES expert, and to demarcate the norms that represent the organisation. The question of who has control of the content of the program has an impact that reaches beyond the diversification of the fellows’ experiences of the fellowship program, as well as beyond IPBES itself. The question of control of the content of the socialisation process is also the question of who has the control of the institutionalisation of the organisation.

Throughout the analysis it has become evident that the socialisation process has important functions with regard to producing expertise and institutionalising an organisation. This is especially true in organisations like IPBES, which is similar to a network and not yet a well-established and well known organisation. Because IPBES relies on voluntary work from experts all around the world, it is mainly through the institutionalisation of common norms and a shared identity that IPBES becomes visible and credible as an organisation in the eyes of actors both within and outside of IPBES. This has become evident in the analysis
reported herein (cf. Arpin et al. 2016). Reproducing the skills of how to do an assessment, and thus reproducing the roles of an LA and a CLA, function to institutionalise the process of conducting an assessment. This secures IPBES’s future work by creating a known methodological practice. Producing IPBES’s norms regarding the relationship between nature and society by using an interdisciplinary conceptual framework is crucial for the existence of IPBES. By situating their assessments in a conceptual framework with interdisciplinary normative implications on how to assess and understand reality, IPBES strives to influence both their member states and primary organisations. By producing its conceptual and methodological framework, as well as working to take the leading position in socialising new experts to maintain norms and implement social practices, IPBES creates its own expertise and its own uniqueness, and it solidifies its place as an expert organisation and meta-organisation.

In sum, this current study of IPBES’s fellowship program has given an example and lessons of that whoever controls the socialisation process also control important aspects of the organisation, such as the production of expertise and the institutionalisation of the organisation. This applies to IPBES as well as any other expert organisation. For an expert organisation to produce expertise to facilitate, strengthen, and institutionalise a well-functioning science-policy interface, taking responsibility to make the roles and norms explicit throughout the socialisation of new members has been shown to be key features for gaining control of the learning outcome of the socialisation process and the institutionalisation of the organisation.

Notes

1. In 2016, a second cohort of 16 young scholars were accepted into the fellowship program to participate in the global assessment on biodiversity and ecosystem services. However, this cohort is not part of the current study, which focuses on the first cohort of the fellowship program.
2. The conceptual scheme is developed to be descriptive, and ‘do not mean to suggest that one dimensional form is better than another /…/ One must first comprehend the schema and analyze how it operates in different organisational cultures’ (Tierney and Rhoads 1996, p. 38).
3. The decision to not interview fellows participating in the thematic assessment on land degradation and restoration is not considered to have affected the collected material in such a way that the analysis have resulted in biased conclusions. However, to be able to go beyond the scope and result of this study and additionally further the exploration of the development of IPBES’s fellowship program, and IPBES’s socialisation of new experts, additional studies need to be made focusing e.g. the following cohorts of the fellowship program.
4. The excerpt have been slightly revised by the interviewee with respect to language.
5. Twenty-five fellows attended the workshop; eight fellows were unable to attend. One of the reasons for not attending was a lack of financial support. In line with UN rules for the use of IPBES’s trust fund, IPBES can only offer financial support to young fellows who come from developing countries. This means that fellows from developed countries, regardless of their personal employment and financial situation, have to independently finance their participation in the IPBES fellowship program.

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References
Ahrne G, Brunsson N. 2005. Organizations and meta-organizations. Scand J Manag. 21:429–449.
Ahrne G, Brunsson N. 2008. Meta-organizations. Cheltenham: Edward Elgar.
Arpin I, Barbier M, Ollivier G, Granjou C. 2016. Institutional entrepreneurship and techniques of inclusiveness in the creation of the Intergovernmental Platform on Biodiversity and Ecosystem Services. Ecol Soc. 21(4):11.
Beck S, Borie M, Chilvers J, Eguerra A, Heubach K, Hulme M, Lidskog R, Lövbrand E, Marquard E, Miller C, et al. 2014. Towards a reflexive turn in the governance of global environmental change. The case of the IPCC and the IPBES. GAIA. 23(2):80–87.
Garrett PB, Ba quedano-López P. 2002. Language socialization: reproduction and continuity, transformation and change. Ann Rev Anthropol. 31:339–361.
Checkel JT. 2005. International institutions and socialization in Europe: introduction and framework. Int Organiz. 59:801–826.
Checkel JT. 2013. Socialization and organized political violence: theoretical tools and challenges. Simons Papers in Security and Development, No 28, School for International Studies, Simon Fraser University, Vancouver.
Connelly S. 2010. Constructing legitimacy in the new community governance. Urban Stud. 48(5):929–946.
Declaration of Helsinki of 2008. 2008. [accessed 2015 Nov 30]. http://www.wma.net/en/30publications/10policies/b3/index.html.pdf?print-media-type=|page|\toPage.
Díaz S, Demissew S, Joly C, Lonsdale W, Ash N, Larigauderie A, Adhikari JR, Arico S. 2015a. The IPBES conceptual framework – connecting nature and people. Curr Opin Environ Sustainability. 14:1–16.
Díaz S, Demissew S, Joly C, Lonsdale WM, Larigauderie A. 2015b. A rosetta stone for nature’s benefits to people. PLoS Biol. 13(1):e1002040.
Granjou C, Mauz I, Louvel S, Tourmay V. 2013. Assessing nature? The genesis of the intergovernmental platform on biodiversity and ecosystem services (IPBES). Sci Technol Soc. 18(1):9–27.
Gustafsson KM, Lidskog R. 2017. Boundary organizations and environmental governance: performance, institutional design, and conceptual development. Clim Risk Manage. doi: https://doi.org/10.1016/j.crm.2017.11.001.
Guston DH. 2001. Boundary organizations in environmental policy and science: an introduction. Sci Technol Hum Values. 26(4):399–408.
Hooghe L. 2005. Several roads lead to international norms, but few via international socialization: a case study of the European commission. Int Organiz. 59:861–898.
IPBES. 2013a. Decision IPBES-2/3: Procedures for the preparation of the Platform’s deliverables. Decision from the Second Meeting of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services; Dec 9–14; Antalya, Turkey.
IPBES. 2013b. Decision IPBES-2/5: Work programme for the period 2014–2018. Decision from the Second Meeting of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services; Dec 9–14; Antalya, Turkey.
IPBES. 2015a. Decision IPBES-3/3: Procedures for the preparation of Platform deliverables. Decision from the Third Meeting of the Plenary of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services; Jan 12–17; Bonn, Germany.
IPBES. 2015b. Letter from Professor Zakri Abdul Hamid, Chair, Intergovernmental Platform on Biodiversity and Ecosystem Services to launch a call for nominations of fellows for the IPBES young fellows pilot programme.

IPBES. 2016a. About IPBES. [accessed 2016 June 2]. http://www.ipbes.net/about-us.

IPBES. 2016b. IPBES 4/INF/9: Report of the Executive Secretary on the implementation of the work programme 2014–2018. Guide on the production and integration of assessments from and across all scales (deliverable 2 (a)); Feb 22–28; Kuala Lumpur.

IPBES. 2016c. Plenaries. [accessed 2016 October 3]. http://www.ipbes.net/plenary/plenaries.

Johannessen BGG, Unterreiner A. 2010. Formal and informal mentoring in academia for the 21st century. Educ Soc. 28(3):31–49.

Johnston AI. 2001. Treating international institutions as social environments. Int Stud Q. 45:487–515.

Johnston AI. 2005. Conclusions and extensions: toward mid-range theorizing and beyond Europe. Int Organiz. 59:1010–1044.

Leino H, Peltomaa J. 2012. Situated knowledge–situated legitimacy: Consequences of citizen participation in local environmental governance. Policy Soc. 31:159–168.

Miles MB, Huberman AM, Saldaña J. 2014. Qualitative data analysis: a methods sourcebook. 3rd ed. Los Angeles (CA): Sage.

Mullen C, Huntinger J. 2007. At the tipping point? Role of formal faculty mentoring in changing university research cultures. J In-Serv Educ. 34(2):181–204.

Morin J-F, Louafi S, Orsini A, Oubenal M. 2017. Boundary organizations in regime complexes: a social network profile of IPBES. J Int Relat Dev. 20:543.

Tierney WG, Rhoads RA. 1993. Enhancing promotion, tenure and beyond Faculty socialization as a cultural process. ASHE-ERIC Higher education report No.93-6. Washington (DC): The George Washington Uni., School of Education and Human Development.

Tierney WG, Rhoads RA. 1996. Promotion and Tenure Community and Socialization in Academe. Albany (NY): State University of New York Press.

Turnhout E, Behagel J, Ferranti F, Beunen R. 2015. The construction of legitimacy in European nature policy: expertise and participation in the service of cost-effectiveness. Environ Politics. 24(3):461–480.

UNEP. 2012. UNEP/IPBESMI/2/9: Report of the second session of the plenary meeting to determine modalities and institutional arrangements for an intergovernmental science-policy platform on biodiversity and ecosystem services. Panama City, Apr 16–21.

Vadrot ABM. 2014. The politics of knowledge and global biodiversity. London: Routledge.