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# The role of academia practice partnerships in the well-being economy: Retracing synergies between health and social sciences using bibliometric analysis<sup> $\star$ </sup>

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#### ABSTRACT

Well-being economies develop policies at the intersection of health and socio-economic inequalities. These policies are often informed by data-driven approaches, such as quality-of-life indicators. However, despite great efforts in measurement, it is known that the perspectives of underserved and unhealthy populations are not always fully captured. This raises the question to what extent well-being economy policies, informed by data alone, can adequately improve well-being for all. In this paper we investigate the potential of academia practice partnerships (AcPrac) in facilitating transfer and production of knowledge and skills between researchers and practitioners (including decision makers, governments, and communities) to create well-being policies informed by both data and people. We use bibliometric analysis to visualise the current state of knowledge on AcPrac. We find that 1) the health field has made the largest scientific contribution in this area, 2) cross-fertilization, which is at the heart of the well-being economy approach, is starting to take place between health and social sciences, and 3) concerns for equity are a shared value underlying transdisciplinary partnerships for well-being. Our findings contribute to understanding the role of AcPrac in advancing well-being economies and informing policy, but further research is needed to draw conclusions about its effectiveness.

# 1. Introduction

The health sector has become increasingly aware of the importance of socio-economic determinants of health and health equity [1]. At the same time, decision makers have been moving towards more holistic economic approaches that focus on well-being and equity rather than GDP alone. Both approaches recognise the interconnectedness between health, economy, society, and environment. The well-being economy is an important health policy agenda leveraging on these developments. This initiative is supported by institutions such as the WHO and the OECD [2,3]. Moreover, there are growing alliances between diverse actors including researchers, governments, the public and businesses. Examples of public sector approaches include well-being budgeting by treasuries, quality-of-life indicator frameworks developed by governments and statistical offices as well as participatory methods including the public in policy design. In addition, businesses are also becoming concerned about broader measures of success such as Environmental, Social and Governance (ESG) criteria, so recently some authors [4–6] proposed to enrich this framework adding a Health criterion and move towards an ESG+H framework.

Despite great advances in data and measurement on well-being and inequality, the pitfall is that policymakers are often prone to `treasure what is measure' and instead may overlook phenomena that are not measured or easily measurable [7]. In advancing well-being, this is of primary importance because data collection of underserved populations is not equally spread [8]. For example research shows that fractions of the unhealthy poor adult EU population – who would benefit the most from well-being economy policies - are falling out of key indicators of

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social progress and deprivation in the European Union [9]. These considerations raise the question to what extent well-being economy policies, informed by data alone can adequately capture, reflect, and consequently improve the well-being of all citizens. The rationale for this paper is to map transdisciplinary networks - across disciplines and between research and practice - of knowledge and individual expertise to foster potential alliances.

The objective of this paper is to investigate the potential of academia practice partnership(s), in the remainder of the paper abbreviated as AcPrac, in facilitating transfer, production and co-creation of knowledge and skills between researchers, governments, industry and the public in a way that allows, in a complementarity perspective, to advance wellbeing outcomes supported by evidence from both data and people. Practitioners are here defined broadly to include decision makers, governments, civil society, industry and even the public (individuals and communities).

AcPrac has been studied in many different disciplines adopting different terminologies. We use bibliometric analysis which allows to investigate complex webs of information and identify key debates and authors within and between areas of research over time [10]. We use the free software VOSviewer [11], accepted in a broad range of academic disciplines, which provides simplified visualisations, or maps, enabling both researchers and practitioners to engage with our findings.

Research conducted using AcPrac, in contrast to other forms of research, intentionally seeks to involve communities in the research process and includes their perspectives which allows to improve policy design and better support underserved communities who's needs may not fully shine through taking a pure data-driven approach. Research participation can take place through direct partnership with a community or indirect partnership with a community representative. The approach also feeds into the frame offered by the United Nations' SDG 17 – partnering for the goals.

Our findings show that the AcPrac literature is particularly well developed within health sciences. In recent years, social sciences have been drawing from the large body of evidence produced by health. This cross-fertilisation lies at the heart of the well-being economy approach. The recent debates, adopted language, networks of researchers and practitioners identified in this study can potentially be used to advance the well-being economy by researchers and practitioners operating in this space to facilitate transfer, production and co-creation of knowledge and skills.

#### 2. Materials and methods

The constant growth of scientific publications often makes it difficult to circumscribe the boundaries or to identify the latest trends of a field of literature. Bibliometric analysis, and the available software packages, provide an important methodological advancement allowing to map patterns of knowledge transfer between (sub) disciplines within large and complex bodies of literature [12]. Section 2.1 specifies the process of the database construction. Section 2.2 describes the bibliometric indicators used in the analysis. Section 2.3 describes the free software VOSviewer [11,13], parameter choices underlying the visualisations for replicability, and its limitations. Through the analysis we followed the most recent bibliometric guidelines [10].

#### 2.1. Database construction

The database used for the analysis was created using Scopus Advanced Search. The search included several terms that orbit around research on AcPrac. They have been identified and selected after different brainstorming sessions of the authors. Boolean operators have been used to create the following string: (Collaboration\* OR Partnership\* OR Co-creat\*) AND (Research\* OR Academi\* OR Universit\*) AND (Practitioner\* OR Practice OR Communi\* OR Praxis). The search allows for suffix variation, which is indicated by an asterisk. For example, 'research'' captures 'research', 'researcher' and 'researchers'.

These search criteria were applied on 10th May 2022 to paper titles initially identifying a total of 2,588 records, with the largest three categories being articles, conference proceedings and book chapters. We applied no filter to subject area or on the document type because we are interested in capturing how AcPrac is studied in a transdisciplinary manner - across disciplines and between research and practice. Moreover, since our purpose is to analyse the evolution of the AcPrac literature, we put no restrictions on the time period. A validity check has been independently performed by two authors removing a total of 229 papers (9%) based on the following exclusion criteria: short corrigenda (18), documents where collaborations between academics or practitioners was unclearly stated (114), duplicates including older working papers or conference proceedings (44). For the duplicates we summed the number of citations of older versions and added them to the most recent version to not loose information about dissemination. We further deleted erroneous entries (3) and records with unclear information (50). During the screening process, between the involved authors there were no major disagreements about the excluded articles. Minor disagreements fell mainly in the ambiguous categories where collaborations were unclearly stated and records with unclear information, which were jointly discussed and resolved. Following these steps 2,359 papers remain in the clean database used for analysis. The final database time frame ranges from 1954 [14] to 2022 (with 70 papers in 2022). In 2021, the last complete year in our database, it is possible to count a total of 216 relevant publications.

### 2.2. Selected bibliographic indicators for science mapping

To map the literature under investigation we took into account three standard bibliometric indicators: bibliographic coupling, co-occurrence of words, and co-citation analysis [10,15]. These individual indicators are described below. To these three common indicators we added a fourth indicator obtained combining the information from bibliographic coupling and co-occurrence of words into a matrix and that we developed ourselves for reasons described in the text below.

# 2.2.1. Bibliographic coupling

Bibliographic coupling [16] "is a technique for science mapping that operates on the assumption that two publications sharing common references are also similar in their content" [10, p. 288]. Thus, the higher the number of references in common, the stronger the content relationship between documents because they draw upon a similar knowledge base to advance their argument. When mapped collectively this produces a network of clusters within and between (sub) disciplines based on common references.

#### 2.2.2. Co-citation

Co-citation analysis [17] "is a technique for science mapping that assumes publications that are cited together frequently are similar thematically" [10, p. 288]. In other words, co-citation occurs when two references are cited together by another third document. Differently from bibliographic coupling, co-citation generally involves secondary papers (i.e., the documents that are quoted by the set of documents included in the main database, see Section 2.1) as unit of analysis. When mapped collectively this produces a network of clusters based on the literature underlying the main research topic.

#### 2.2.3. Co-occurrence of words

The co-occurrence of words [15] analysis "is a technique that examines the actual [written] content of the publication itself [and] assumes that words that frequently appear together have a thematic relationship with one another " [10, p. 288]. Our analysis takes the text in papers' abstracts as unit of analysis as they include more words, hence more information. The co-occurrence of words allows to map the research themes (synthetized through the words adopted in the literature) and their interlinkages [18], allowing to understand the foundational topics in the literature [19]. However, differently from bibliographic coupling and co-citation analysis, co-occurrence of words does not provide information on the relationship between documents. Instead, the co-occurrence of words indicator provides an overarching picture based on all text documents considered as a unicum.

#### 2.2.4. Thematic matrix and score

As any literature expands, knowledge accumulates and crossfertilizes between disciplines allowing subject matters to become increasingly nuanced and refined in the lexicon. To assist researchers and practitioners interested in AcPrac, we have created a measure identifying papers in our database with the most well-rounded arguments based on the development of their vocabulary. From a procedural point of view we adopted the following replicable steps: 1) we counted how many times the words identified through the co-occurrence of words analysis appear within each abstract field (when available) of the documents selected through the bibliographic coupling analysis (operating on the main database); 2) we weighted each word by its relevance score (provided by VOSviewer, see below); 3) we summed up the single weighted scores generated through setps 1) and 2) to obtain the total score of each document. This total score allows us to identify documents with a high frequency of relevant (weighted) words within their abstract. In other words, we use the hight of the total score of a document as a proxy for more articulated and refined argumentation. Nevertheless, we acknowledge that this is not a standard bibliometric indicator [10].

### 2.3. VOSviewer

The rationale to use the free VOSviewer software [11] is twofold. First, VOSviewer is accepted in a broad range of academic disciplines. Second, it produces simplified visualisations of the selected bibliometric indicators (bibliographic coupling, co-citation analysis, and co-occurrence of words) enabling both researchers and practitioners to intuitively engage with our findings. The software produces the outputs automatising the mathematical algorithms underpinning the mentioned bibliometric indicators [11,13].

We acknowledge that there is a trade-off between simplicity of the visualisations and level of technicality and arbitrariness when selecting software parameters, applicable to all peer-review research using this software. We took into consideration the following aspects.

First, we have consulted similar applied studies to inform our parameter choices [20].

Second, the software identifies broader networks structures across (sub) disciplines and individual experts, which is the rationale for our study and chosen methodology. Indeed, our chosen methodology does not allow to capture the effect, heterogeneity, or robustness of topic specific interventions. For this purpose other types of reviews [21], such as a systematic review, would be preferred. To the best of our knowledge, there is one systematic review on AcPrac based on the PRISMA criteria [22] and which is largely focused on the partnership process informed by research carried out in different disciplines. However, our purpose is different and takes a wider lens to map networks of knowledge across disciplines that may be used in ongoing efforts to build well-being economy alliances between researchers and practitioners. Thus, our analysis does not strictly follow PRISMA standards [23] and through the bibliometric analysis we neither want nor can draw conclusions on the process or effectiveness of these partnerships.

Third, without putting restrictions on the time period or discipline the database size can still be managed by the software. Our database entirely captures the AcPrac literature from beginning to most recent publications (up to the day we applied the search criteria). Moreover, the sensitivity analysis excludes non-relevant papers (9%), so we don't expect there to be a risk of bias based on the choice of the software. Nevertheless, a possible risk of bias might arise through the selection of search terms based on the authors a priori subject knowledge. Indeed, during the research process we discovered specialised AcPrac terminology that could be used to refine the database construction in future analysis. However, updating the analysis to reflect these ex-post learnings would defeat its purpose. Despite these limitations, we argue that the methodological choices are grounded in the previous literature and in line with the paper objectives.

For replicability purposes, we provide the chosen VOSviewer parameters that have been made to construct the visualisations provided in the reminder of the paper.

- Fig. 1a,b (bibliographic coupling) uses full counting and selects all documents (2,359), of which 10% with the highest link strength (236) are used for the visualisation. The total link strength indicator "measures the coupling strength of two given papers reflecting higher and more citations to other papers they share" [24, p. 1187].
- Fig. 2 (co-citation) uses full counting, cited references (secondary papers) as unit of analysis, minimum number of citations 5. In line with the existing literature we introduced a thesaurus to remove misspellings and merge duplicates. The VOSviewer algorithm identifies 45 documents cited together under the specified parameters. These documents are a proxy for seminal papers frequently used together by papers in our primary database.
- Fig. 3 (co-occurrence of words) uses abstracts as unit of analysis and operates on 1,957 abstracts in total, because some documents like books do not have an abstract. To reduce noise when producing the network visualization we have created a thesaurus removing general words such as *analysis, paper, issue,* etc., and merged synonyms or misspellings. Generic terms such as *the* are automatically discarded by the software. We adopt a binary counting and a minimum threshold of 25 times of appearance to be potentially relevant. After applying these filters across all the documents' abstracts 190 words meet the threshold and the default option of 60% is kept. Thus we produced the visualization on the most relevant 114 words.

# 3. Results

This section presents the key trends observed in the database (Section 3.1) and the bibliometric maps produced by the software VOS-viewer (Section 3.2).

### 3.1. Trends in the literature

The AcPrac literature grows steadily over time and experiences a surge from the 2000s onwards. According to the Scopus categorization of disciplines, approximately 40% of the identified documents come from health sciences and approximately 30% from social sciences. The largest remaining categories include computer science, engineering, business and management, arts and humanities and environmental science. The oldest [14] and most cited papers in our database are health related. In synthesis, the AcPrac literature appears to have originated from within health sciences. The next part of the analysis will help come to grips with developments within the health science literature and reveals how the production of documents from the social sciences literature has built upon the foundations created within health.

#### 3.2. Bibliometric indicators and visualization

This section presents the visualisations for the bibliographic coupling, co-citation, and co-occurrence of words analysis produced in VOSviewer and the thematic matrix (Table 1) we created ourselves. The different visualisations should be viewed as taking several 2D pictures from different angles of a 3D object that cannot be entirely observed. The visualisations provide pieces of information that combined help to track the development of the AcPrac literature within and between (sub) disciplines and their interactions over time. Combining these images



Fig. 1. (a) bibliographic coupling literature AcPrac based on authored documents (thematic clusters above) and (b) bibliographic coupling and its evolution over time (time clusters below).



#### Fig. 2. Co-citation of cited references.

Note: 20% of these references are also inside our database and 80% are external. Out of the 45 documents about half of the papers are social sciences (largely on systematisation of AcPrac as a science) and one third health related.

allows to create a complementary and complete story [25,24,26–28]. However, it must be pointed out that the interpretation of the underlying 3D object is reconstructed based on the knowledge of the researcher(s). We proceed to show the Figures with visualisations and Table followed by their interpretation.

The interpretation of Figures follows the standards of VOSviewer [11]. The colours represent thematic (sub) disciplines (Fig. 1a), time periods (Fig. 1b), clusters of secondary literature (Fig. 2) and words content (Fig. 3) depending on the unit of analysis. In the discussion these will be referred to as thematic colour clusters, time clusters, source clusters and keyword clusters, respectively. As mentioned before, Figures are based on different snapshot of papers within the main database therefore colour clusters are not comparable between Figures. Circles represent individual papers or keywords. The size of the circle indicates the number of times a paper is cited or a word appears. The lines represent how the circles connect within the wider network. The distance between two circles reflects the strength of the relation between the items (the closer, the stronger).

### 4. Discussion

The discussion of the results will be divided into two parts. Section 4.1 describes the trends within and between disciplines that are immediately observable from the Figures and Table. Section 4.2 provides a

deeper analysis of the contents of the papers. Bibliometric analysis does not allow to delve as deep into subject specific matters as a systematic literature review but given the size of the database stays at a more macro level.

#### 4.1. Developments within and between disciplines

As a recap, based on Section 3.1, most of the AcPrac papers are from health sciences and social sciences. Both the oldest and most cited papers are from health sciences which appears to have built the foundations for the AcPrac discipline. Our analysis sheds light on developments within health sciences and allows us to draw conclusions whether the younger social sciences literature has built upon the foundations created within health. In what follows we base ourselves on the most cited papers within the three thematic colour clusters (Fig. 1a), indicated by the large circles, and source clusters (Fig. 2). This provides enough information to understand which disciplines the large circles represent. The time clusters (Fig. 1b) provide complementary information on how these disciplines have developed over time.

The key papers in the red thematic cluster are all health related and are also the oldest in the network. The red thematic cluster titles mostly refer to Community Based Participatory Partnerships (CBPR) used in the context of public health, preventative medicine, urban health, and health education. The green thematic cluster also centres around CBPR



Fig. 3. Co-occurrences of words.

 Table 1

 Papers with the highest thematic matrix score combining bibliometric coupling and co-occurrence of words

| Thematic cluster | References           | Total scores<br>(respectively)        | Discipline                           |
|------------------|----------------------|---------------------------------------|--------------------------------------|
| Red              | [44,45,49,<br>59,76] | (19.9; 19.4; 19.3;<br>18;17.6)        | All health related                   |
| Green            | [34,47,62,<br>77,78] | (18.77; 18.05; 18.03;<br>16.95;16.90) | Health, environment, social sciences |
| Blue             | [36,55,63,<br>79,80] | (12.56; 12.09; 9.19;<br>7.62; 6.85)   | All social sciences                  |

Note: The yellow thematic cluster (Fig. 1a) includes only four papers on very different niche topics and is therefore not considered. Matrix scores and disciplines corresponds to the references, respectively.

but uses more abstract terms related to the AcPrac process such as challenges, opportunities, perspectives, and evaluation. The blue thematic cluster, also the youngest time cluster, includes mainly social science related documents from education and most recently political science. Even though social sciences make up about 30% of the database they are not picked up by the bibliometric indicators as many of these papers are newer related to health and the literature is still in development. In other words, within social sciences AcPrac has not resolutely emerged yet as a specific approach (apart from the sub discipline education). The cluster size and heterogeneity do not allow to draw broader conclusions from this cluster. Finally, the yellow time cluster shows a branching out over time with more recent papers being developed within social sciences, as well as development of case work and systematic evaluation of the AcPrac process related to the green thematic cluster.

In Fig. 1 the health papers by Israel et al. (2001;2006) and Minkler (2005) and the social sciences papers by Jagosh et al. (2015) and Coburn et al. (2016) [29–33] have an important connecting function. Most of these works are also in the source clusters signalling their overall importance in the database. The source clusters (Fig. 2) reveal which papers are often cited by the papers inside our database. This map includes papers within and external to the database, but no clear disciplinary patterns emerge from the source clusters. The clusters contents will be described in the next section, but the initial findings point towards an emerging feedback loop (cross-fertilization) between health and social sciences within the wider AcPrac literature (Fig. 4). This feedback loop is interesting in the context of well-being economies



Fig. 4. Feedback loop between health and social sciences in the AcPrac literature.

acknowledging the interconnectedness between health and its social and economic determinants.

# 4.2. Drawing lessons from health and social sciences

We adopt the following guiding steps to identify key messages based on paper contents from which we draw generalisable lessons. To our knowledge there is no standard reporting framework for bibliometric analysis allowing to derive specific lessons based on paper contents, in our case 2,359 documents. However, during the above process particularly relevant individual papers have been scrutinized more carefully. First, from the main database we observe 34 (mostly systematic) reviews plus three reviews outside the database form the co-citation analysis. A total of 11 reviews were identified to be informative on the health and social sciences feedback loop (Fig. 4) used in the interpretation [22,34, 35,36,37-43]. Second, VOSviewer allows us to identify important papers in the database which have been read in more detail. This includes the top 10 most cited papers per thematic cluster (30), papers from the co-citation analysis (45) and papers from the thematic matrix (15). The overlapping papers identified through combining these methods (13) are expected to hold particularly useful information. Third, the world clusters in Fig. 3 are also used to distil content-based lessons within and between disciplines. These steps inform the general patterns described below. Through these steps we have identified three key motivations within AcPrac and general patterns in both health and social sciences.

<u>Health sciences</u> Key motivation for AcPrac

- 1 For health promotion and prevention requiring broader shifts in behaviour, norms, and cultural sensitivity whilst working with patients and/or communities [29,30,44–46,]
- 2 To conduct health interventions targeted towards minority groups and incorporate these groups into research and policy design so to reduce health disparities [44,47,48]
- 3 Either to create trust between researchers and underserved communities to improve a societal outcome or to counteract the effect of bad research practices when trust has been broken down [32, 4950–52]

### General patterns

Public health stands out as the main AcPrac sub discipline within health sciences [29,30,40]. AcPrac within public health is otherwise known as Community Based Participatory Research (CBPR) and is defined as "on social, structural and physical environmental inequities through active involvement of community members, organizational representatives, and researchers in all aspects of the research process" [31, p, 173]. In later work economic determinants are also recognised [30]. The CBPR methodology has a clear link to well-being economies which acknowledges the interconnectedness between economic, social, structural, and environmental inequalities and health equity. The later work on CPBR extends to sub disciplines such as urban health [31,50] and moves from case studies and theoretical framing towards broader enquiry about partnering practice including success and hindering factors and ethics [31,32]. Fig. 2 provides an indication of methodological papers which likely underpin work on public health from within the database [31,40] and external to the database (case study approaches [53] and thematic analysis [54]). The blue word cluster (Fig. 3) provides an indication that the public health literature largely describes health interventions with a focus on reducing health disparities for groups such as older adults, women, and youth [44,47,48]. Nursing is another sub discipline within health sciences which has its own lexicon indicated by the yellow word cluster in Fig. 3 but is not picked up by the other bibliometric indicators. This might indicate that the AcPrac literature on nursing has been developed independently from public health.

Social sciences

Key motivation for AcPrac

- 1 To facilitate and improve evidence-based decision making amongst system leaders (decision makers) for example public sector and educators [33,55,56]
- 2 To create a more democratized evidence system and knowledge cocreation through partnership equality in terms of knowledge and skills [35,36,38,57,58,]
- 3 To improve the education process. This use takes a broad lens ranging from improvements in the curricula, to including practitioners' perspectives and leadership training [33,47,59]

## General patterns

Social sciences are a younger area of research in AcPrac. It does not (yet) show up as a separate word cluster (Fig. 3) and education is the main sub discipline within social sciences. The main AcPrac framework in education is Research Practice Partnerships (RPPs) defined as "longterm collaboration between practitioners and researchers that are organized to investigate problems of practice and solutions for improving schools and school districts" [33, p. 48, 60]. We have previously identified that this seminal work draws upon the knowledge base created in health and is influencing other papers within social sciences. Keywords related to education can be observed in the green word cluster (Fig. 3). However, we also observe words such as clinical practice and nurse suggesting that education is studied across AcPrac disciplines. Political scientists are now also developing a framework for AcPrac. A group of authors [61, p. 726] discuss the concept of Civically Engaged Research (CER) to address social problems which is defined as "academic and non-academic partners focussing on improving the governance of social or political problems" with a particular concern for equity. CER aims to co-produce knowledge that improves governance and express a desire for political scientists to "support venues in which people can share their learned lessons and lived experience from collaborations to further understand the praxis of partnership" [61, p. 728]. The same paper contrasts the use of CER, CBPR and RPPs frameworks, corroborating that our methodology is picking up key pieces of information from the literature in an accurate way [61].

## Cross-fertilization

Fig. 3 (red word cluster) suggests that the partnership process is another sub discipline of research and both health and social sciences are contributing to this lexicon. Our reading suggests that the AcPrac process is studied both within health and social sciences and between them to derive generalisable lessons [22]. This work includes case studies as well as reviews on the partnership process often derived from the individual cases [22,30,34,50]. Partnerships are usually designed around shared values and joint objectives and putting knowledge into action, thus advancing social change [44,62-65]. At the heart we observe equal partnerships where knowledge and skills of each partner are valued, listened to, and potentially transformed into being mutually reinforcing to reach the envisioned outcome [66,67]. Thus, equity lies as the heart of both CBPR and CEP methodology [29,61]. This process allows to build trust between partners and create sustainable outcomes with a long-run focus [32,49-52]. Inequality related terms such as disparity, power, trust, and recognition are picked up by Fig. 3. In this case partnership composition can take various forms including university and a community representative, university and direct community access, university and higher-level decision maker (e.g. policymaker or school leader). The green word cluster (Fig. 3), paired with a reading of the other indicators, suggests that education is studied in different contexts such as schools, public health and nursing. The process of knowledge and skill creation within AcPrac is observed across disciplines.

The thematic matrix (Table 1) has allowed us to identify papers which are drawing from multiple word clusters – as a proxy for cross-fertilization. This exercise allows us to identify concrete examples of how cross-fertilisation is taking place based on paper contents. First, Minkler et al. (2008) [68] examines four different CBPR partnerships addressing how training practices can educate legislators on environmental health rated problems. Second, Baker et al. (1999) [51] propose

a set of principles that assists partnerships between researchers and community groups in the context of family violence prevention programmes. It is recognized that health improvements require a multisectoral approach and there is a need to include individual, social, and economic factors to achieve the desired health outcomes in a context of violence. Third, an Australian academia practice partnership has focussed on the co-creation of community based health services with potential for broader social impact [35]. Fourth, El-Jardali et al. (2018) [69] discusses co-creation between universities, governments, and communities to advance the Sustainable Development Goals (SDGs) combining different areas such as economy and environment to combat systemic health challenges.

# Knowledge gaps

Our bibliometric analysis suggests that quantitative studies on AcPrac are still quite rare. Little is known about the effectiveness of academia practice partnerships in influencing real world outcomes such as well-being. We acknowledge that the availability of evidence does not automatically result in policy changes given that "some policymakers maintain a 'hierarchy' of evidence to which they will respond based on particular research methods" [70, p. 2]. To the best of our knowledge, we could find only one approach quantifying the partnership process in terms of uptake of evidence but not the envisioned social outcome. This approach is called Research Impact Through Matchmaking (RITM) and connects practitioners working at non-profit organizations and social scientists [71]. Empirical findings show that interaction between researchers and practitioners (for example a single conversation) improves evidence-based decision making compared to when research materials are circulated without this type of interaction [71,72].

## 4.3. Implications from AcPrac for the well-being economy

The knowledge, skills, and individual authors identified through the bibliometric maps are all very relevant for real world implementation of the well-being economy. Holistic policy agendas, such as the well-being economy, recognise that social, economic and environmental factors play a key role in determining health status [29,73] and contribute to a disproportionate burden of disease amongst underserved communities [29]. Theoretical frameworks for AcPrac developed within health (CBPR) and social sciences (CER) have an explicit concern for equity. Moreover, there is a strong complementarily between CBPR and CER frameworks. CBPR works closely with communities and/or patients while CER operates more at the level governance for social or political problems. In this context, the meaning of cross-fertilisation extends to social sciences being able to learn from CBPR frameworks on how to better include communities into the AcPrac process to help shape desired outcomes. In turn, health sciences are able to learn from CER on how to better govern for social outcomes or train system leaders, potentially, also in partnership with social and economic sectors. Education appears to be a key channel through which knowledge and skills are built to sustain partnerships, a channel recognised in both health and social sciences research.

## 4.4. Limitations

We acknowledge the limitations to our research. First, our study has only considered academic work (journal articles, conference proceedings, books etc.) in Scopus. Our analysis misses any learnings reported from practice that are not in these formats. Second, the available work on AcPrac is likely a self-selection since documenting the partnership process is usually a side objective of the partnership itself and is often hindered by time and resource constraints. In this sense there are most likely many undocumented (successful and unsuccessful) partnerships. Third, compared to researchers, community leaders often need to make decisions at a quicker pace with less time to reflect on the partnership process potentially biasing the literature [74] Fourth, the application of AcPrac in the real world is not without struggle and ethical concerns [31,58,65,67] – Fig. 3 red cluster even picks up the word tension and power dynamics. We acknowledge there is a gap between our desk analysis and real word implementation [22,70]. Fifth, seminal studies have been created largely in the United States [29,33] and many case studies are Global North examples. Sixth, we recognise the limitations of the method and the software explained in detail in Section 2.3.

## 5. Conclusion

The well-being economy is an important health policy agenda leveraging on developments within the health sector, coming to grips with the socio-economic drivers of health (inequalities), and developments within socio-economic sectors, moving beyond GDP. This is because economic decisions are often data-driven, e.g. based on qualityof-life-indicator frameworks. However, despite great efforts in measurement, it is known that perspectives of underserved and unhealthy populations are not always captured in these frameworks. This raises the question to what extent well-being economy policies, informed by data alone, can adequately reflect, and consequently improve the well-being for all.

The aim of this paper was to investigate the potential of academia practice partnerships (AcPrac) in facilitating transfer and production of knowledge and skills between researchers and practitioners to advance well-being outcomes informed by evidence from both data and people. We used bibliometric analysis and the software VOSviewer because it provides simplified visualisations allowing both researchers and practitioners (broadly defined) to engage with our findings. This approach has the potential to foster real world connections and the transfer of knowledge and skills between researchers and practitioners aiming to advance the well-being agenda. VOSviewer allows to investigate large bodies of literature and the specific focus on AcPrac allows to identify transdisciplinary patterns (across academic disciplines and between research and practice).

We find that the majority of the AcPrac research is carried out in health and social sciences. Health sciences have put AcPrac on the map and have built the largest knowledge basis. The younger social sciences literature, in early stages of development, is influenced by the existing knowledge basis in health. There are signs of cross-fertilization running between health and social sciences over time. This pattern strongly feeds into the objectives of the well-being economy, but also relevant for other holistic economic agendas.

Our methodology has identified theoretical frameworks distinguishing three types of AcPrac: (1) Community Based Participatory Research – mainly used in public health (2), Research Practice Partnerships – mainly used in education and (3), Civically Engaged Research – recently proposed in political science. A key motivation to use AcPrac in these frameworks are overarching concerns for equity, better use of evidence in decision making, actively incorporating experiences of the public (and left behind groups) into decision making and the role of education and training when engaging in multistakeholder partnerships.

There is potential complementarily between the different AcPrac approaches which can be studied in more depth in future research. To give a few examples. First, social sciences can learn from CBPR frameworks on how to better include communities into the AcPrac process to help shape desired well-being outcomes. Second, health sciences can learn from CER and RPP on how to better govern for broader well-being outcomes or train health system leaders and health educators, potentially, to facilitate knowledge transfer when partnering with social and economic sectors. Third, CBPR works closely with communities and/or patients, CER operates more at the level of governance for social or political problems [61] and RPP has an emphasis on education. Starting a dialogue between researchers and practitioners familiar with CBRP, CER and RPP can provide new insights on how to better integrate data-driven and people-based approaches in evidence-based decision and policy making at the local, national, and international level. There are different approaches to studying AcPrac. Most studies are qualitative case studies and systematic reviews of these studies, focussing on partnership process and framing of partnership principles. To our knowledge, there is only one attempt to quantify the AcPrac literature in terms of uptake of evidence into decision making. A clear gap in the literature are systematic attempts to quantify desired health and social outcomes that may arise through AcPrac. This complicates concluding anything on the generalisability of the effectiveness of AcPrac in improving social outcomes and how well this method allows to incorporate `missed' perspectives.

Our findings contribute to understanding the role of AcPrac in advancing well-being economies and informing policy, but further research is needed to draw conclusions about its effectiveness. Examining the current state of the literature, it is hard to stipulate the exact channels connecting the outcomes of one-off AcPrac initatives (case studies) to broader well-being outcomes. Moreover, we acknowledge that AcPrac is one of multiple channels through which this objective can be reached and its overall effect may be diluted. Our research aims to bring out overlapping values and objectives motivating further integration of health and social sciences in AcPrac to advance the well-being economy. At the time of writing, the use of AcPrac to include disadvantaged communities is a growing and ongoing topic of scholarly debate [75] complemented by a policy context in which alliances around the well-being economy are being created between research, governments, decision makers and the public.

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