The legacy of the Danish 'church fathers' N.F.S. Grundtvig and S.A. Kierkegaard in 11,955 contemporary sermons

Anne Agersnap[1], Kristine Helboe Johansen[2] and Katrine Frøkjær Baunvig[1]

[1] *Center for Grundtvig Studies, Aarhus University, Denmark*
[2] *Department of Theology, Aarhus University, Denmark*

Abstract

In this paper, we investigate representations of the two influential Danish nineteenth-century theologians *N.F.S. Grundtvig* (1783-1872) and *S.A. Kierkegaard* (1813–1855) in a text corpus of 11,955 modern-day sermons from the Evangelical-Lutheran Church in Denmark (ELCD). Through a word embedding analysis we map the semantic habitat of the two theologians individually and in relation to key theological concepts. The study thus illuminates the reception and role of these historical figures in the ELCD today.

Keywords

Contemporary sermons, N.F.S. Grundtvig, S.A. Kierkegaard, word embedding, neural networks, associative patterns.

1. Introduction

Christian preaching is an interpretive practice, in which pastors evoke religious authoritative sources such as scripture, agents and concepts in a concrete temporal context for congregated listeners. In this study, we delve into a text corpus of 11,955 Danish sermons from 2011–2015 written by 95 pastors and investigate how two figures central to the institutional and intellectual formation of the Evangelical-Lutheran Church in Denmark (ELCD), *Nikolai Frederik Severin Grundtvig* (1783–1872) and *Søren Aabye Kierkegaard* (1813–1855), are interpreted and associated with the key Christian symbolic triad of *faith, hope* and *love*. This triad holds authoritative concepts deeply rooted in Christian traditions. With a biblical foundation —in the so-called *Hymn of love* in the epistle of Paul (1Cor13) —the conceptual cluster of *faith, hope* and *love* has grown central not least to the Christian art forms with poetry and visual arts being the most obvious. Our study is thus meant to explore the interpretative links between particularistic features of Danish church life, Grundtvig and Kierkegaard, and universalistic features of Christianity in the form of central concepts. We investigate the interpretive practice in sermons, by deploying word embedding analysis to map the associative relationship between the theologians and concepts.

N.F.S. Grundtvig and S.A. Kierkegaard are important theologians in Denmark. They lived through the turbulent process of Danish mid-nineteenth-century nation building, where the establishment of the Evangelical-Lutheran Church in Denmark (ELCD) in 1849 was a pivotal mark. Though contemporaries, Grundtvig and Kierkegaard have come to represent two differing theological stances and clerical mentalities that have influenced modern Danish church history each in their own way. Grundtvig is often represented as a key player in the 'democratisation' of Danish church life. He conceived of the church as an institution building on singular, concrete congregational communities defined and upheld by ritual practices such as hymnic community singing. These communities were the context where individuals could experience and strengthen their religious faith. This analysis led Grundtvig to produce a bulk of material intended to support precisely this community: He wrote and rewrote close to 1,600 hymns and songs and he is the author of one third of the official Danish hymnal.

Kierkegaard, on the other hand, is known for his philosophical and theological pondering over the human condition of the individual in Modernity; his position is often categorised as proto-existentialistic. To him, faith was a matter of individual choice. Whereas Kierkegaard internationally is the most famous of the two, Grundtvig is the most important on the national Danish scene.

2. Data

The corpus we deploy for analysis consists of 11,955 ELCD sermons mainly from 2011–2016 written by 95 pastors.[2] The corpus was sampled by direct request to all pastors in the ELCD in 2017. There are approximately 2000 pastors in the ELCD, so the corpus represents close to 5% of employed pastors.[3] However, pastors in the ELCD are employed on different terms, which means that not all pastors preach every week, and therefore, the corpus does not hold an even distribution of sermons from the 95 pastors. The corpus is thus sampled based on a pragmatic approach to acquiring data rather than a probabilistic sampling approach, making the corpus an *opportunistic corpus* [3]. Therefore, the corpus is not a representative sample, but a comprehensive case sample of sermons from the same church community over the same period [4]. The corpus is thus pertinent for studying the associative structures in which modern-day pastors inscribe Grundtvig and Kierkegaard.

Even though there are inherent imbalances in the data due to the sampling approach, the corpus displays acceptable variations in terms of metadata. Around 96% of the sermons in the corpus were written between 2011 and 2016, while a limited number were written on either side of this period. There is also a small number of sermons for which we have no date (approximately 0.02% of the entire corpus). All pastors in the data are born in between 1950 and 1988, but there is an overrepresentation of sermons written by pastors born in the 1960s (45%), and secondly in the 1970s (25%). The distribution of sermons by men and women is only a little skewed (M: 57%; F: 43%), seeing that a counting in 2014 revealed that 55% of employed pastors in the ELCD were female and 45% male [5].[4]

3. The distribution of Grundtvig and Kierkegaard

The core input terms for the sermon analysis are "grundtvig" and "kierkegaard". A previous study has mapped and analysed the character gallery of the sermon corpus [7] and has accordingly provided descriptive statistics regarding these input terms. The data for the character study was characters mentioned 10 times or more in sermons, which comprises a character gallery of 600 unique characters. Based on named-entity-recognition, the study shows that out of the 600 characters, Grundtvig is the 19th most mentioned character in the corpus with a frequency score of 1,154 references; to compare, the most frequent figure is Jesus Christ, who is mentioned 89,228 times. Kierkegaard is the 31st most mentioned character with a frequency score of 614. Besides Martin Luther at a 13th place and a frequency score of 1,481, the characters that surpass Grundtvig and Kierkegaard based on frequency scores are all biblical figures. Biblical figures are naturally important figures in this type of corpus since pastors in Denmark are obliged to preach on prescribed lectionary texts from the gospel. Therefore, despite the obvious observation that Grundtvig is almost mentioned two times as often as Kierkegaard, both of them are on the top three of the 471 non-biblical figures (1. Luther, 2. Grundtvig, 3. Kierkegaard) that pastors choose to inscribe in sermons independent of prescribed biblical texts.

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[2] The corpus is hosted at Aarhus University and stems from a collaborative project. The project partners are data owner Kirstine Helboe Johansen (dept. of theology), Anne Agersnap (the Grundtvig Study Center), Uffe Schjødt (dept. of the study of religion), Ross Kristensen-MacLachlan (Center for Humanities Computing Aarhus) and Kristoffer Laigaard Nielbo (Center for Humanities Computing Aarhus).
[3] For further information on the organisation of the Evangelical-Lutheran Church in Denmark, see [1] or [2].
[4] For an in-depth presentation of the sermon corpus (sampling, annotation, archiving procedures) and corpus statistics, see [6].

4. Word embedding analysis

We deploy a word embedding analysis to generate the semantic networks of Grundtvig and Kierkegaard. Presupposing the study in focus, a semantic kernel has been trained specifically to perform word embedding analysis of the sermon corpus.[5] The analysis entails that the kernel computes the distance between input terms called *seed terms* and the remaining of the corpus lexicon, which consists of 125,311 unique terms. The algorithm then extracts a set of *primary associations*, which are the terms with the shortest distance to the seed terms, and a set of *secondary associations*, which are the terms with shortest distance to the primary terms. Then, distances between all terms — seed terms, primary associations, and secondary associations — are computed and all terms are connected based on their distance to the other extracted terms under a given threshold. These connections constitute semantic clusters that have been extracted using the Louvain method [8] and are represented visually as networks in graphs with nodes as terms and edges as distance between nodes. In the graphs, seed terms and primary associations are represented in upper case and secondary associations in lower case.

The method distinguishes itself from for example a collocation analysis, since the word embeddings do not attend to cooccurrence of the terms. Instead of representing terms appearing together as pairs throughout the corpus, the graphs represent the associative relationship between terms meaning that the graph maps terms behaving similarly to each other in the corpus. The primary associations are terms that tend to occur in proximity to the same terms as the seed terms. The principle is the same for the secondary associations in relation to the primary associations. Combined, the primary and secondary associations map the semantic habitat of the core terms. The graphs thus become networks of association that outline the semantic contexts of the seed terms.

We distinguish between two sets of seed terms in the analysis — core seed terms and control seed terms. The core seed terms are "grundtvig" and "kierkegaard", as we are specifically interested in their role and possible variances from each other. We then use the terms from a theological conceptual triad "tro" (*faith*), "håb" (*hope*), "kærlighed" (*love*) as control seed terms to probe these variances further. We thus generate two types of graphs: one type with only the core seeds, "grundtvig" or "kierkegaard" (figure 1 and figure 2) and one type with a core seed and the control seeds representing the symbolic triad (figure 3 and 4). In each of the six generated graphs, we represent the seed terms with two primary associations and 15 secondary associations. In figures 1 and 2, we look for associations narrowly linked to Grundtvig and Kierkegaard. In figures 3 and 4, we generate networks with more than one seed term, which discloses a more complex semantic pattern. In these last cases, we prompt, so to speak, the semantic kernel to display associative links between the core terms and the triad terms.

5. Results
5.1.   Who are Grundtvig and Kierkegaard in sermons?

Figure 1 below visualises the word embedding of "GRUNDTVIG". The primary associations are "DIGTER" (poet) and "BRORSON" referring to Hans Adolph Brorson (1694–1764), who along with Grundtvig, Thomas Kingo (1634–1703), and Bernhard Severin Ingemann (1789–1862) are typically considered the most influential hymnwriters in Denmark. The primary associations belong to the subgroup of yellow nodes along with other hymn composers – "kingo" and "ingemann" – and terms connoting a general context of hymns – "morgensalme" (morning hymn), "salmedigter" (hymnwriter), "påskeblomsten" (the daffodil).[6] The subgroup of pink nodes are all first and last names that seemingly denote famous Danish authors such as Søren Ulrik Thomsen (1956–), Halfdan Rasmussen (1915–2002) and Hans Christian Andersen (1805–1875). Of the primary associations, we see that "DIGTER" is the

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[5] Code applied for the seeded word embedding analysis is available here: <u>GitHub - centre-for-humanities-computing/Semantic-Kernel: Tool for building and visuaulising neural concept graphs.</u>
[6] The literal translation is 'easter lily'; the flower is prevalent in Grundtvig's lyrics, and it symbolically refers to the resurrected Christ. The most famous poem dedicated to the flower is: "Paaskeblomst, hvad vil du her!" (1817, 1837). The English translation is "Easter flower, why are you here!".

proximate node to the pink subgroup of literary authors. Accordingly, through these subgroups, we find two main characteristics of Grundtvig in sermons, namely as hymnwriter and as author of other literary genres. Moreover, the network convincingly places Grundtvig in a Danish national context bridging historical and contemporary figures. Grundtvig is related to hymnwriters and to authors who together with Grundtvig constitute the historically authorised poetic-theological resource of contemporary Danish Christianity. Still, Grundtvig also points forward in relating to contemporary authors and hymn composers such as Iben Krogsdal (1967–) and Jens Rosendal (1932–) ("krogsdal", "rosendal"). Thus, Grundtvig is nested broadly in the Danish hymnic tradition including both older and younger hymn writers.
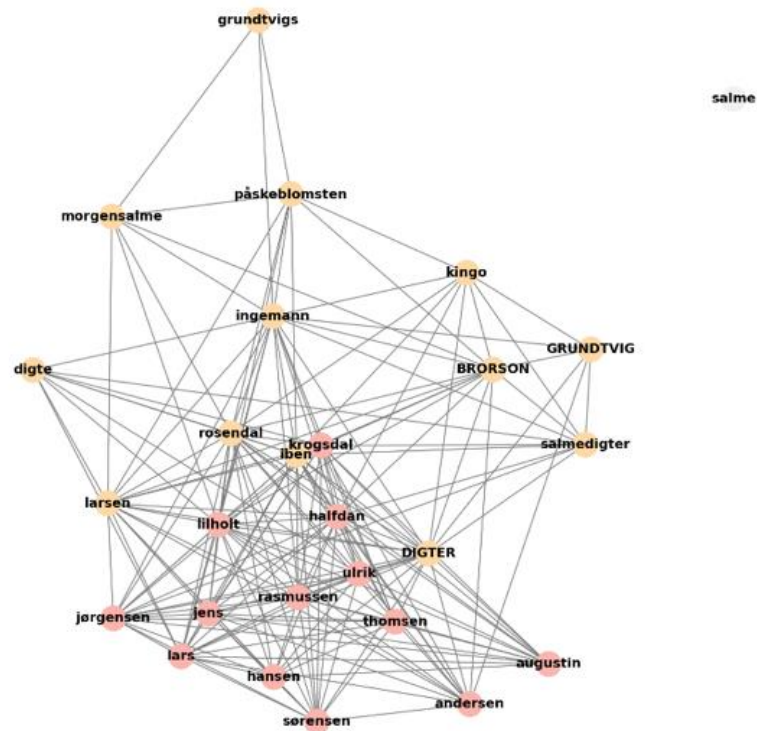
Figure 1. The semantic network of Grundtvig.

Figure 2 below visualises the word embeddings of "KIERKEGAARD". Again, there are two subgroups indicated by yellow and pink nodes that mainly constitute first and last names. The seed term "KIERKEGAARD" belong in the yellow subgroup along with other theologians and intellectuals: Knud Ejler Løgstrup (1905–1981), Augustin (354–430), Desmond Tutu (1931–2021), Albert Einstein (1879–1955). The primary associations to "KIERKEGAARD" are "SØREN" and "THOMSEN" most likely referring to the first name of Kierkegaard, Søren, and the Danish author and poet Søren Ulrik Thomsen also occurring in the semantic context of Grundtvig. The primary associations take part in the pink subgroup, where generally many of the same authors seem referenced as in the semantic context of Grundtvig. Therefore, Kierkegaard, and Grundtvig alike share connotations to a literary field. However, Grundtvig and Kierkegaard are strikingly not associated to each other, and the visualisations furthermore indicate noteworthy variances. Kierkegaard appear as a theologian and an intellectual, who also shares connotations to international figures such as Einstein, Tutu and the author C.S. Lewis (1898-1963). This would confirm the international influence and acknowledgement of Kierkegaard as a philosopher. In contrast, Grundtvig is situated in a clearly Danish context emphasising his role as a national figure. Moreover, he is featured not so much as a theologian, but rather as a poet —in particular a hymnwriter. Furthermore, Kierkegaard points more to contemporary figures with the reformer Martin Luther (1483–1546) and the philosophically prone Augustine of Hippo (354–430) being the only associations rooted deep in the Christian tradition. Thus, Kierkegaard appears less bound to his time and more bound to the genre of theological-philosophical thinking.
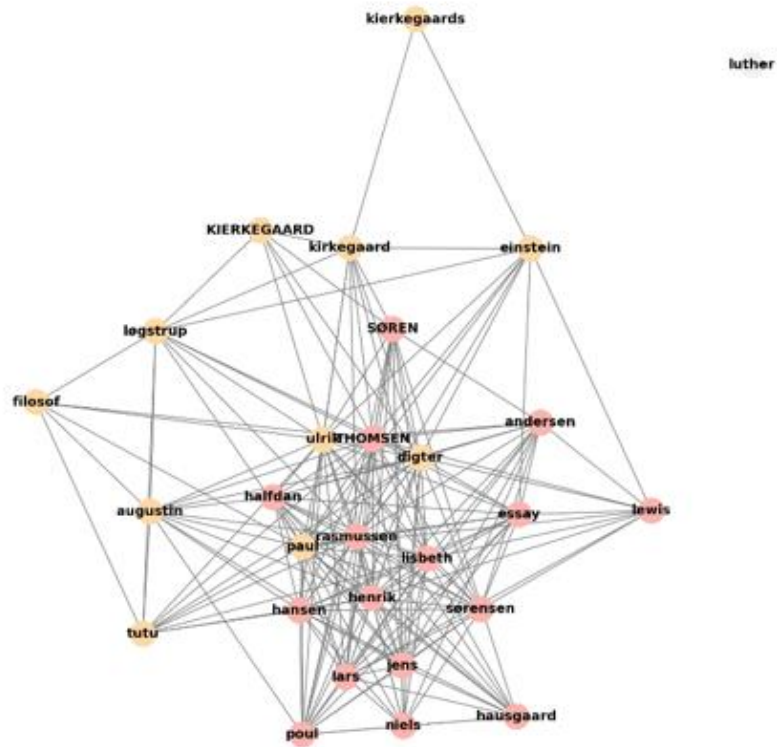
Figure 2. The semantic network of Kierkegaard.

5.2   Faith, hope and love

Figure 3 and figure 4 below represent the associative relationship between "GRUNDTVIG" and "KIERKEGAARD" respectively and the triad terms "TRO" (faith), "HÅB" (hope), "KÆRLIGHED" (love).
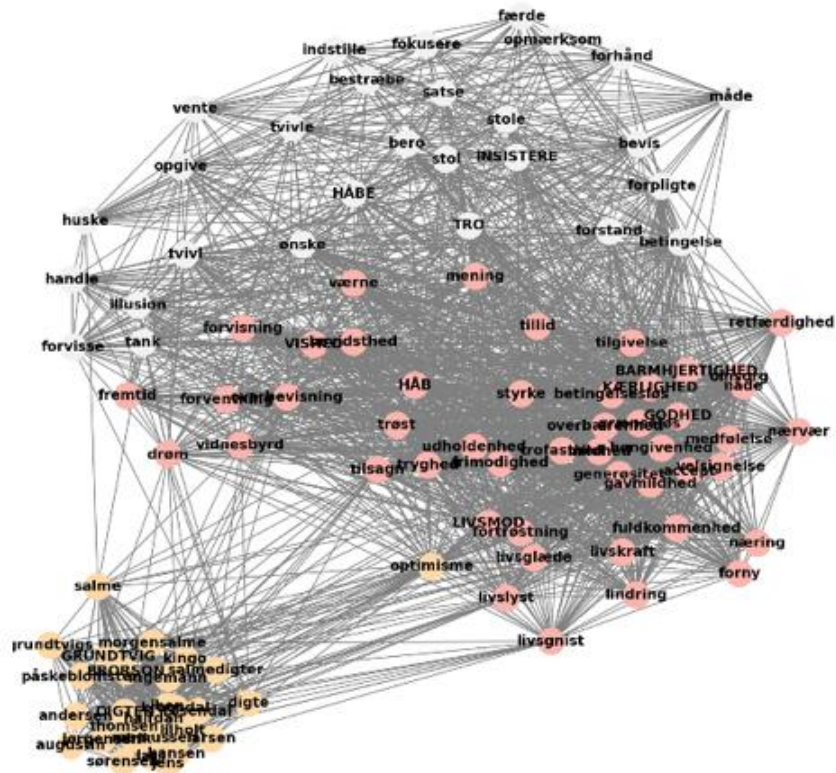
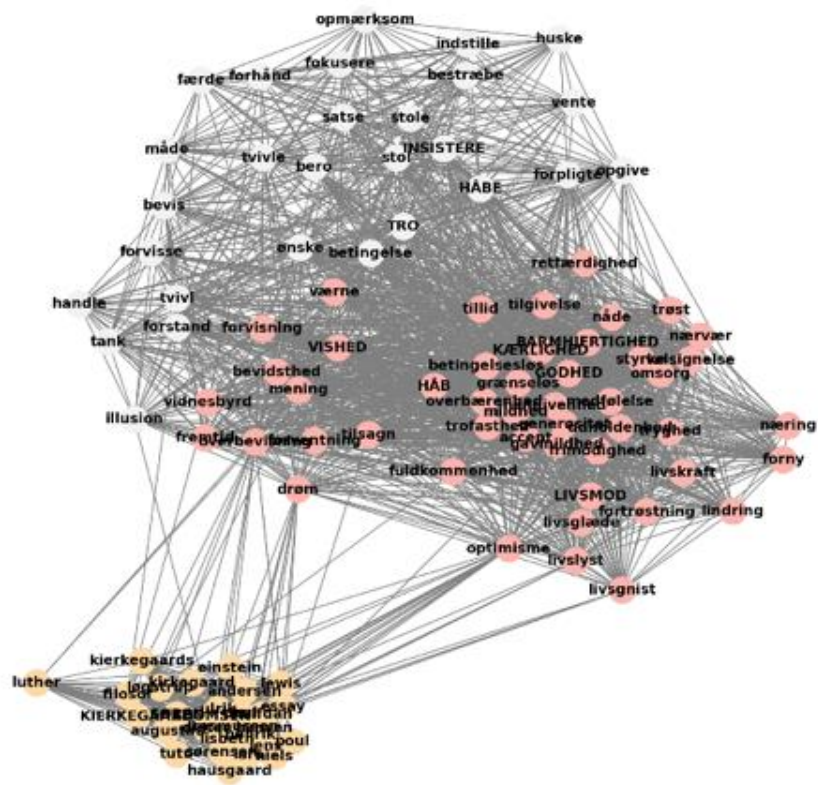**Figure 3.** The semantic network of Grundtvig, faith, hope, and love.

Figure 4. The semantic network of Kierkegaard, faith, hope, and love.

The core clusters of both "GRUNDTVIG" and "KIERKEGAARD" are generally dense and secluded from the triad clusters illustrated by the yellow nodes. The triad clusters are indicated by two colours: "TRO" with the primary associations "HÅBE" (to hope) and "INSISTERE" (to insist) and the secondary associations belonging in the grey cluster; "KÆRLIGHED" with primary associations "BARMHJERTIGHED" (mercy) and "GODHED" (goodness), and "HÅB" (hope (noun)) with the primary associations "VISHED" (certainty) and "LIVSMOD" (spunk[7]) as part of the same cluster illustrated by the pink nodes. This indicates that there are more similarities between "KÆRLIGHED" and "HÅB" than between those two and the third term "TRO". One of the linguistic differences between the two clusters is that the semantic context of "TRO" especially comprises verbs in the form of infinitives such as "tvivle" (to doubt), "satse" (to gamble), "stole" (to trust), "bestræbe" (to endeavour). In Danish, "TRO" is a homonym functioning as both a noun (faith) and a verb (to believe). The word embedding of "TRO" thus indicates that the term mostly occurs in the sermon corpus as a verb rather than as a noun. This tells us that "TRO" is defined in terms of deeds that, however, as demonstrated from the terms above, are distinctly mental or inward acts. In contrast to "TRO", "KÆRLIGHED" and "HÅB" appear mostly with other nouns — for "KÆRLIGHED" these are nouns such as "medfølelse" (compassion), "tilgivelse" (forgiveness), "hengivenhed" (devotion), and for "HÅB", "forventning" (expectation), "trøst" (comfort), "udholdenhed" (endurance). In this way, the word embeddings of these seed terms appear as semantic conceptualisations of "HÅB" and "KÆRLIGHED" evoking a rather emotive vocabulary.

Even though these terms are part of the same overall cluster, their respective word embeddings behave differently. The word embedding of "KÆRLIGHED" is very dense with nodes almost overlapping, while the embedding of "HÅB" disperses into two groups — one group of nodes surrounding "LIVSMOD" close to the "KÆRLIGHED" embedding, and one around "VISHED" considerably closer to the "TRO" cluster. This last group is also rather close to the node "HÅBE", which is the verbal form of the noun "håb". This indicates, despite the cluster colouring, a certain degree of familiarity between the semantic contexts of hope and faith in the corpus. Meanwhile, there is the least familiarity between "KÆRLIGHED" and "TRO" within the triad.

When comparing figure 3 and 4, we find variations between Grundtvig's and Kierkegaard's orientation to the triad structure. The word embedding of "KÆRLIGHED" is overall consistent between the figures. However, there are subtle nuances between Grundtvig's and Kierkegaard's association to the remaining clusters in the triad structure, as certain terms are displaced, when comparing the two figures. For instance, the nodes "bevis" (proof), "forstand" (intellect) and "betingelse" (condition), which are secondary associations to "TRO", occur on the borderline of the network furthest away from the Grundtvig core cluster in figure 3, while these nodes in figure 4 are placed considerably closer to the Kierkegaard cluster. Thus, intellectual ("forstand") and argumentative ("bevis", "betingelse") aspects of faith are pulled towards Kierkegaard. Moreover, this may relate to the observation that the intellectual theological context of the Kierkegaard cluster is more oriented towards the "TRO" cluster and the "VISHED" cluster rather than towards "KÆRLIGHED" and "LIVSMOD". The association between Kierkegaard and faith thus seems to be an intellectual theological connection.

Grundtvig is considerably more oriented towards aspects of hope and especially to the semantic cluster around "LIVSMOD", which is also the subcluster of "HÅB", appearing proximate to "KÆRLIGHED". Concretely, the node "optimisme" (optimism) in figure 3 is yellow, indicating a certain associative strength between this aspect of hope and Grundtvig. Moreover, the nodes "tryghed" (security), "trøst" (comfort), "udholdenhed" (endurance) and "styrke" (strength) that are part of the word embedding of "HÅB" appear very close to the Grundtvig core cluster. These nodes are placed comparatively distant to Kierkegaard in figure 4. Furthermore, with Grundtvig, the hymn context of the core cluster connects to the nodes denoting aspects of hope. This observation suggests that it is mainly a "Grundtvig of hope" rather than a "Grundtvig of faith" that is represented in sermons — particularly anchored in his role as hymn composer. With Kierkegaard, the dynamic seems reversed, as there are mostly an association between Kierkegaard and faith rather than between Kierkegaard and hope or love. In many ways, these findings confirm the theological positions and differences of Grundtvig and Kierkegaard. Furthermore, they emphasise the theological link between the two and the triad

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[7] The literal translation of "livsmod" would be life-courage.

differently. With Kierkegaard, it appears as an intellectually anchored link to faith, whereas Grundtvig is more connected to the triad through an emotionally based vocabulary surrounding hope and love.

6. Conclusion

The purpose of this study was to investigate pastors' contemporary glance on the historical theological authorities in Denmark, Grundtvig and Kierkegaard, by juxtaposing them to general authoritative concepts in Christianity: *faith, hope, love*. In this way, pastors' interpretation of these concepts has helped illuminate and nuance the theological role of Grundtvig and Kierkegaard in modern-day sermons.

Even though we clearly find a classic Grundtvig and a classic Kierkegaard in the sermon corpus, they are not just adopted as theological "products" of their time. Their individual networks showed that they are endowed with connotations transgressing their own historical context. In the individual network of Kierkegaard, this was expressed through associations to theological-philosophical thinkers succeeding him all the way up until today. For Grundtvig, the associations also include characters – particularly poets and new hymnists – all the way up to contemporary time, but also hymnists preceding him.

Measuring the core networks of the theologians against the triad networks unveiled subtle, but significant variations between Grundtvig and Kierkegaard in the network structures. These variations entailed that the Grundtvig cluster and the Kierkegaard cluster were oriented differently towards the triad networks; that significant terms in the triad networks obtained a closer position to the clusters of either Kierkegaard or Grundtvig; and that certain terms originating from the networks of triad seeds were absorbed to the clusters of Grundtvig, indicated by the cluster colouring of the nodes. We found that Kierkegaard and Grundtvig are quite classically characterised, meaning that they connect to the triad through associative links that points to key elements in their theological thinking. For Grundtvig, this entailed an accentuation of his role as a hymn composer and an emotive and optimistic framing in his relation to hope and love. In Kierkegaards relation to the conceptual triad, the orientation was towards faith, emphasised through associations to an intellectually reflected relationship rather than to an experiential emotive relationship.

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