PRESENT WORK AND FUTURE RESEARCH CHALLENGES AT CHESS

A Research Positioning Exercise

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INTRODUCTION

CHESS is a research centre dedicated to a topical area – health inequalities, their origin and the mechanisms involved in creating and shaping such inequalities, and how they might be addressed through policies. As such, the research at CHESS can be described as ‘free within boundaries’. What are then the most important topics to address within these boundaries, and how can we best design a process that fosters an ongoing discussion and provides a basis for well-informed strategic research decisions?

In particular for CHESS, which is set up around a research topic that is specific, yet very broad, the issue of how we can find a way to determine what the most important research issues becomes important. During the existence of CHESS we have moved from a situation where a large part of our work was guided by one overarching application (the founding application, followed by the Forte Centre application), where different research issues were put together in a common framework. As our external as well as internal funding has grown, a larger part of our work is now formulated and financed outside the overarching themes, although usually strongly related to this. While this development is welcome and necessary, it does raise the issue of how we make sure that we do ‘the right things’ in a more general sense. Because, while it is reasonable to believe that each research project that receives funding is indeed addressing some of the most important topics in their respective field of study, it is less obvious that the mix of different topics covered also automatically corresponds to the most important knowledge gaps.

This was also identified as a challenge for CHESS in the Strategic plan for 2013-15. External evaluators have on several occasions commented on that CHESS does research on too many topics, thereby risking that resources are insufficient to make an important contribution to any of these topics. At the same time, however, the same evaluators often also wanted to see more topics being covered. This ambiguity reflects a real dilemma – there is a broad range of interesting and important research topics in the field of health inequalities research, but CHESS cannot address them all. Therefore, there is a need for a mechanism that allows us to make such priorities. In the Strategic plan it was concluded that “Forskarnas nyfikenhet, intresse och möjlighet att få finansiering för vad de vill arbeta med blir ofta det som i realiteten avgör vad vi sammantaget forskar om. Detta är i sig en del av forskningens dynamik och inget som bör eller kan styras. Men det är samtidigt förstås centralt att den mix av konkreta forskningsprojekt som bedrivs någorlunda väl överensstämmer med vad som är viktiga och centrala frågor i vårt fält. Vi ligger nog ungefär rätt i denna avvågning, men det vore rimligt om vi på ett mer strukturerat sätt kunde göra egna bedömningar och avstämningar av detta under den kommande 3-årsperioden.” A process for how this could be achieved was also outlined in the Strategic plan.

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1 “The researchers’ curiosity, interests and possibilities to get funding for what they want to work on is in reality often what decides the combined research package of CHESS. This is a part of research dynamics that cannot and should not be centrally governed. At the same time it is essential that the mix of research projects carried out at CHESS are reasonably well in line with important and central research questions in our field. We are probably reasonably well positioned in this sense, but it would be beneficial if we could assess and evaluate the balance between what we do and what we should do in a more structured way during the coming three-year period.”
The central elements outlined in the Strategic plan included the identification of key research questions in our field, and to relate those to the research that we are currently doing. This idea has been further developed in this ‘positioning exercise’ which includes three parts:

1. An analysis of publications 2013-15 aimed at identifying main themes in the research areas/topics covered;
2. A similar analysis of input from CHESS’ researchers on important knowledge gaps and research challenges in the field of health inequalities for the coming 10-15 years (aimed at identifying main themes of knowledge gaps and research challenges); and
3. An analysis of the answers to the same questions on future research topics from a panel of international experts in the field (for a list see Appendix 2).

The first two components in this exercise are essential for establishing what we are presently working on in relation to what we (as a collective) believe are important issues for the future. The third component is included mainly as a point of reference – are the themes that can be extracted from the input given by CHESS’ researchers different from those of our international colleagues?

The analysis and clustering of publications is a fairly basic but important attempt to characterise our output in terms of topical content, and not only in terms of number of publications, or publication points according to the Norwegian model or citations as used by Stockholm University. These measures are important to establish the volume and impact of what we do, and CHESS has often performed among the best of the departments of our faculty. Here, however, we are interested in the research topics covered, which are as important. As described below, the clustering of publications is based on the complete output from CHESS and not only peer reviewed papers, in order to report from all types of communications channels. We have included publications from 2013-2015, i.e. the same period as the Strategic plan.

While our publications constitute a core part of what we are doing and should obviously be taken into account in this positioning exercise, it is less obvious how to best capture key research questions in our field. Our starting point was that strategically important research questions are regarded as important in order to advance the understanding of key mechanisms and processes, and where essential knowledge is presently lacking. Such research questions are probably, but not necessarily, also posing research challenges in terms of data, methods or theory. We therefore asked all researchers at CHESS (PhD students included) “Which are the most important knowledge gaps and research challenges in the health inequalities field in the coming 10-15 years?” (see Appendix 1). We asked them to think about the field as a whole and mention 2-3 challenges/knowledge gaps and motivate why they believe these to be crucial for the progress of the field. As with the publications, we have made an attempt to group the suggested topics into a smaller set of hierarchical clusters.

The two parts have first been analysed and clustered separately. These clusters have then been analysed in relation to each other in order to identify commonalities and differences, and are reported as the main findings. However, we also believe that the mappings of output content and ideas for the future are essential in their own right. Similarities and differences in terms of the knowledge gaps/research challenges identified by CHESS researchers and international colleagues will of course also be of interest.
METHODS

Research areas presently covered

The volume and distribution of publications was mapped by undertaking several different approaches in order to identify all publications that CHES researchers have published between 2013-01-01 and 2015-04-25. An initial search was conducted on the CHES website (www.chess.su.se/publications), where lists from 2013, 2014 and 2015 were extracted. Two additional lists, from 2013 and 2014 respectively, were retrieved from the CHES internal server. An additional list of publications was found in DiVA (Digitala Vetenskapliga Arkivet). This therefore meant that we had several lists that were similar but not identical, from three different sources. We merged the lists in order to have one complete list containing all publications. Although the search was comprehensive, it cannot be concluded with certainty that we now have all publications. The individual researcher is responsible for reporting his or her work, and there may therefore be missing cases.

The next step was to group the publications into themes based on titles, keywords and abstracts (when possible). We based our methodology on concept mapping (Booth, Papaioannou and Sutton, 2012) since it is a useful way of identifying key concepts and provides a form of classification of the vast number of publications that CHES has published during the last years.

The initial sorting strategy was to list keywords from titles, as well as article abstracts and keywords. These keywords were then grouped together based on similar concepts. We illustrated this with a map diagram based on the listed keywords and how these are linked to, and arranged around, central themes (see Figure 1). It intends to give an overview of the main characteristics and helps to determine what research has been previously carried out, as well as to identify research gaps, which will then possibly help decide future research areas. It also provides a summary visual of the quantity of the available evidence. Since a number of papers have double focus areas, they are listed under several themes. Therefore, the percentages in Figure 1 will not add up to 100%, but instead 103%.

Knowledge gaps

Survey to CHES’ researchers

A number of questions regarding the most important knowledge gaps or research challenges in the field of Health inequalities research for the coming 10-15 years were sent out to CHES research staff (from professors to PhD students) 2015-03-31 (a reminder was sent out 2015-04-20) (see Appendix 1). The questionnaire was sent to 25 researchers at CHES, and 23 of these replied, giving a response rate of 92%.

Responses were then read through carefully and the main points of each reply was summarised and clustered together with other related comments, based on main themes. The themes were given general (and broad) titles in order to compare the suggestions from CHES researchers and the international panel. A map diagram of the themes was used to organise and illustrate the main points to provide an overview of the results (see Figure 2).

Survey to an international panel

A group of 41 senior and influential international experts in the field of health equity research was identified (see Appendix 2). Of these 22 have replied, giving a response rate of 55%. The first email was sent 2015-04-28, and reminder emails were sent to those who did not respond. As we initially had
a very low response rate the first reminder included a draft version of this report, including the background and first analysis of CHESS publications and questionnaire responses. Thereby we hoped to better explain how the replies from the international panellists were to be used.

The email sent included a description of the aim and purpose of the Research Positioning Exercise, and panellists were asked to answer the same question about future research challenges and knowledge gaps. Replies were read through and the main points were summarised and clustered together into key themes, similar to the ones suggested for the CHESS researchers’ replies. A map diagram was used also here to illustrate the results (see Figure 3).
RESULTS

The results section will be divided in three main parts. First, we describe the themes that emerge from our positioning exercise of published papers and suggested knowledge gaps/research challenges respectively. These two are highly interesting in their own right, since they provide solid descriptions of what we do in terms of the content of our recent research as well as what topics and approaches we believe are important. We also present the knowledge gaps and research challenges brought up by our international panel. In the second part we make a first attempt at drawing these two parts together in order to make a comparison of ‘papers’ and ‘dreams’. In the final part we present a comparison of the knowledge gaps and research challenges brought up by CHESS researchers in comparison to those brought up by the international panel.

Descriptive findings

Research themes in CHESS publications

After merging the lists of publications between 2013-01-01 and 2015-04-25, we can conclude that CHESS has 180 publications during this period. Eight main themes have been distinguished but some overlapping does exist. Each publication is listed under the theme with the best fit, and some publications are placed under two themes due to double focus areas. Each theme received a descriptive title based on the content of the publications comprising this theme.

The eight main themes are mentioned below and briefly explained. Themes are listed based on largest to smallest representation. A number of publications have been grouped together and titled ‘other’ due to the heterogeneous nature of the group. The content of this group is only briefly explained below.

Childhood conditions and health among children and adolescents (n=52): This theme mainly involves social conditions in childhood and adolescence that have an effect on childhood and adolescent health. These are school-contextual factors (peers, school achievement, psychosocial school conditions etc.), family characteristics (parental mental illness e.g.), and childhood living conditions (abuse, divorce etc.).

Early origins of adult disease and later life chances (n=31): This theme is concerned with biological and social conditions in early life and the effect they have on adult health. Some research focuses on the social aspects of the life course approach, such as sibling position and school marks while other research focuses more on the biological aspects, such as birth weight and placenta weight and their effect on health.

SES/SEP and economic resources (n=28): Studies within this theme looks at socioeconomic status/position (income, poverty, education, and occupation, and the mobility and variability of these determinants) and the different pathways through which your status/position is linked to health.
Figure 1. Clusters of publication themes 2013-2015
Welfare states, social policies and politics (n=23): This theme looks at welfare state institutions such as family, unemployment, and pension policies. Several studies analyse health inequalities in a comparative perspective comparing welfare state characteristics and various social policies in association with health. Some studies look at health consequences after financial and economic crises.

Immigration and health (n=18): This theme focuses on both adults and children with a foreign background, in Sweden. Mortality differences by immigrant groups and health status for refugees are main issues. Another issue concerns how asylum-seeking children are affected by their background.

Social resources, social capital (n=16): This theme looks at different types of social resources (emotional support, friendship, social networks and relationships) and its importance for good health. Social mobility and social capital, or rather the lack of social capital and how it affects health, are the main topics. Family related issues such as bereavement and health consequences are also brought up here.

Intergenerational transmission of health and social risks (n=9): The intergenerational perspective considers mechanisms whereby social advantage and disadvantage is transmitted from one generation to the next. Studies look at how health inequalities are reproduced into each new generation and the continuity in social disadvantage both over the life cycle and across generations.

Work and working conditions (n=7): This field focuses on (mainly social) conditions related to work and employment. Research includes health risks associated with night work, self-employment and the workspace.

Other (n=19): Methods/evaluation/data (5), Medical (8), and Descriptive (or does not fit anywhere else) (6).

One way of summarising this figure is by dividing the eight themes into two broad life course stages, namely early life and adolescence, and adult life. The former consists of a large group of studies dealing with ‘Childhood conditions and health among children and adolescents’, but there is also a substantial group of studies on ‘Early origins of adult disease and later life chances’. Together these two main themes comprise more than 45% of the papers published by CHESS researchers during 2013-15. In addition, there is a group of papers on ‘Intergenerational transmission of health and social risks’ (about 5% of publications). The adult life focussed publications can in turn be divided into four main themes, with ‘Welfare states, social policies and politics’, and ‘Socioeconomic position and economic resources’ as the two largest ones (almost 30% of publications). In addition, adult life studies include research on ‘Social resources and social capital’ (9%) and ‘Work and working conditions’ (4%). In addition, we can identify a group of studies on ‘Immigration and health’ that deals with both young and adult persons (10% of publications).

Another way of summarising the emerged themes is by regarding them along an axis going from the societal or structural level to the individual level. When viewing the figure from this perspective we can see that the clusters are instead based on exposures or determinants at different levels rather than life course stage. ‘Welfare states, social policies and politics’ are at one end of this axis, closely associated to ‘Socioeconomic status/position’, ‘Social resources’, ‘Immigration’ and ‘Work’. These themes are linked and related to each other, and a clear example of this is social protection policies and how these have an evident link to poverty. At the other end of the axis, the individual level, we find many of the research topics listed in the ‘Early origins’ as well as the ‘Intergenerational transmission’ themes. These publications focus mainly on biological and psychological processes.
These two ways of interpreting the figure of the publication clusters are not mutually exclusive. On the contrary, they represent the two axes that form the basis of the research approach developed at CHESS, pictured below in Figure 2.

**Figure 2. Model of key aspects of health equity studies at CHESS**
Knowledge gaps/research challenges from CHESS researchers

The replies to our question on knowledge gaps and research challenges vary in length from being a single sentence to two A4-sized pages. After the main points of each reply had been summarised and grouped together with related comments, we have ended up with six main themes (Figure 3, a more complete version is found in Appendix 3). These themes are mentioned below and briefly explained.

**Figure 3. Clusters of knowledge gaps and research challenges for the future**

- **How:** This theme involves CHESS as an organisation and how we can work together collectively, as well as with collaborators in order to advance in our field of research and as a research centre. Other issues concern for example the need for increasing our data catalogue and how this can be done.

- **Analytical approach:** This theme includes topics concerning different approaches to analysing inequalities in health. Main issues are that we need to use different types of approaches to fully understand the mechanisms that drive inequalities in health. Examples include using more complex perspectives, such as the intersectional perspective, and also looking more how individuals behave at an individual level. It is also necessary to develop public health theory in order to go forward.

- **Method:** This theme includes examples of various types of studies that are needed to fill the knowledge gaps in health inequalities research. Examples include intervention studies, and costs and impact assessment.

- **New features:** This theme is concerned with new features that have had an effect on inequalities in health and challenges that these new features might bring for the future. Examples are globalisation, social climate and new ways of looking at health.

- **Stratification dimension:** This theme involves seeing health inequalities from different angles, for example by looking at ethnicity and gender, as well as spatial inequalities.
**Determinants:** This theme includes looking more into determinants that drive inequalities in health. Examples are childhood, adolescence and emerging adulthood, income, discrimination and social relations.

The six themes identified represent different types of challenges and knowledge gaps that CHESS researches have brought forward. We suggest that three more overarching types of *Future Research Challenges (FRCs)* can be identified, namely:

1. Overarching issues, mainly relating to the **analytical approach** taken or how we conduct our studies,
2. The research topics themselves – **what we study**, and
3. The foundations for our studies, such as **data and organisation**.

The third of these is of course essential for our research in many ways since it concerns the means necessary to conduct high quality research. However, while issues such as accessibility and regulations around data, our general funding situation or CHESS position in the Faculty of Social Sciences are highly important, we will in the following sections mainly focus on the ideas around approaches and features of the studies themselves that emerge from the mapping of studies.

It is interesting, and an important finding in itself, that so many ideas and suggestions submitted by CHESS researchers deal with the **analytical approaches** as important challenges (FRC 1). It is also noteworthy that among those, several are concerned with **theory** in various ways. There are the more general suggestions concerning the need to develop theories in public health, but also more specific calls for added focus on how individual choices and human agency relate to health inequalities. There are also calls for a better understanding of the mechanisms involved in creating and shaping health inequalities, including the biological aspects. In addition, a concern for the conceptual side of our analyses is voiced, particularly in relation to the social categories studied and the interplay between those (intersectionality). Taken together, the strong emphasis put on the need to strengthen and develop the theoretical and conceptual aspects of health equity studies is important and should, in our view, be followed up and supported. While these aspects of our research are no doubt already integrated parts of our work, they are often linked to specific subject matters. To the extent that the findings presented here also represent an ambition to improve theory and conceptualisation more generally in health equity studies, it is definitively a challenge that we could well devote more time and energy to.

Regarding the research topics themselves (FRC 2), we identify three different sub-themes, namely, which **dimensions of stratification** we ought to focus on; which **determinants** we consider to be of key importance; and what **new features** of society we believe should be brought into our analyses.

The first theme, **dimensions of stratification**, overlaps the issues brought up under the ‘analytical approach’ theme to some extent, in particular the call for gender as an important stratification dimension.

The different **determinants** mentioned are partly quite general and wide, such as family conditions or the work place, and to some extent quite specific, for example social relations and discrimination. They also overlap: family conditions may include both economic conditions and social relations; the work place also involves aspects of income and social relations, and potentially also discrimination; and the childhood period may include all the other determinants mentioned. Several of the determinants mentioned also involve both structural and individual level components, and the links
and relations between these two are explicitly brought up here. This, in turn, links back to the topics brought up concerning the analytical approaches.

The new features of society also include the links between structural and individual determinants, although more implicitly. Topics mentioned here include changes in society, including global, European, national and individual level changes and the dynamics between these, and to some extent the new features of the inequalities that follow. Again, theoretical and analytical approaches are mentioned, as well as the need for new data. In addition, topics related to ‘health-ism’ and ‘blaming the victim’ are raised here, as well as the outcome of our studies in terms of well-being rather than health.

Knowledge gaps/research challenges from the international panel

The length of the replies from the international panel varies from a couple of sentences to three A4-sized pages. In order to simplify comparisons between the two map diagrams of knowledge gaps (see Figure 3 and 4, and Appendix 3 and 4), we organised the suggestions by creating similar and broad themes under which the suggestions could fit into. After the main points of each reply had been summarised and grouped together with related comments, we have ended up with five main themes and one theme named ‘other’ (see Figure 4, a more complete version is found in Appendix 4). The six themes are mentioned below and briefly explained.

Figure 4. Clusters of knowledge gaps and research challenges, International panel

Analytical approach: This theme concerns different approaches of health inequality research, for example intergenerational, life course and epigenetics. Also mentioned here is the call for theories explaining the mechanisms that cause health inequalities and that we should focus on understanding the processes that produce inequalities. Behaviour is brought up as something that should be incorporated when trying to explain why health inequalities persist, as well as the complexities of intersectionality.

Method, methodology and measurement: Here, focus is on the need for different types of methodologies and methods. Knowledge about the impact of different policies and interventions on health inequalities is scattered and more effort ought to be put into this field. Methods and analysis
methodology is discussed as something that should be developed and improved, as well as what can be done on a global and local level. Questions are raised about how to measure health inequalities, socioeconomic position and how we interpret and present our findings.

**New features:** Change in indicators over time, change in disease patterning as well as incomes, occupation, housing etc., and new types of exposures, for example environmental changes but also changes in populations, rising life expectancy and population dynamics are discussed.

**Stratification dimension:** This theme concerns health inequalities stratified by different groups of people or countries that need particular attention.

**Determinants:** Focus in this theme is on structural determinants such as urban policies, health care and child health policy and how these affect health. Determinants at individual level are also discussed here; examples are vulnerability and resilience, and democratic engagement.

**Other:** What do we mean when we talk about health inequalities? Do we all mean the same thing? This, and the benefits of policies for other outcomes than health is mentioned here.

Five of the six themes identified from the input made by researchers at CHESS have been identified from the knowledge gaps/research challenges suggested by the international panel. Two overarching types of FRCs can be identified:

1. Key issues, mainly relating to **how** studies are conducted, the methodology, methods and measurement, or the **analytical approach** taken, and
2. Research topics- **what should be studied**, including new features, the stratification dimension as well as the determinants.

Many ideas and suggestions submitted by the international research panel mention methodology, methods and measurement, the **how of research**, as important research challenges. Many are concerned with interventions and policy impact in various ways. Some comment on the difficulties of drawing a clear picture based on the existing available knowledge, others find that assessing the impact of policies is a frontier and most suggestions relate to how we should work in order to progress methodologically. There are calls for general ideas that will contribute to reducing inequalities in health, as well as specific suggestions of tools that need to be developed. Other ideas concern the need for development and improvement of how indicators are used in order to more sufficiently reduce inequalities in health. This theme is definitely linked to what we study, the determinants. The link is especially evident for the determinants on the structural level where there is mention about various policies being important for decreasing health inequalities. The significance of policy evaluation and how this is best done is brought up here.

The conceptual part of research, the **analytical approach**, is also brought up as an important theme. Mentioned many times is the epigenetic approach, how the social gets “under the skin”. There are also calls for increased knowledge regarding our understanding of why inequalities in health continue to develop and persist, and understanding the mechanisms that are causing and shaping the persistence of these inequalities.

The international panel brings up three research topic themes which they believe ought to be covered. These are the **determinants** that are most important to focus on, the **new features** in society that we believe are becoming essential for health equity, and the **dimensions of stratification** that are central.
The different determinants mentioned can be divided into two main groups; determinants on a structural level and determinants at the individual level. Determinants on a structural level mainly include general and rather broad ideas, such as what political factors and policies are related to health. Determinants at the individual level are also relatively general, although specific suggestions such as tobacco and obesity are mentioned. The new features theme can also be divided into two main groups; namely, ‘changes’ in society, and new exposures. ‘Changes’ can be described as social and political changes that have appeared, and the problems that we face when trying to deal with them. The new types of exposures refer to, for example, environmental changes and living in overlapping environments. To some extent, the new features overlap the determinants category. This is particularly evident when it comes to different types of policies and keeping up with the changes that are happening in society. The stratification dimension may overlap both the new features theme, as well as the determinants theme. Topics mentioned in this category, migration and low and middle-income countries, are definitely linked to different types of policies and health care in times that are changing.

As with the ideas and comments given by the researchers at CHESS, many themes provided by the international panel overlap and relate to each other.
Comparing CHESS’ present work and future challenges

Turning to the main rationale behind this exercise, we can now begin to look at how the themes we are working on relate to the ones we have identified as important topics for the future. What is the relation between what we are currently doing (based on the publications over the last three years) and what we believe are key knowledge gaps and research challenges for the future?

Starting with the three types of FRCs identified by CHESS, i.e. the analytical approach, what we study, and data and organisation, we can see that while the first FRC listed is not identified in the thematic clustering of our papers, it is of course an integrated part of what we already do. However, we can clearly see that there is an interest in putting more emphasis on the analytical approach as such. This is partly expressed as a call for more theoretical development, in particular in relation to public health, but also in terms of developing more complex approaches to inequality itself (intersectionality). More specifically, the role of the relation between individuals and the structures they find themselves in, or structure-agency, is mentioned. These are also aspects that emerge from the suggestions that primarily concern new features of societies, inequality dimensions and determinants.

The second FRC involves more clear overlaps and links with what we are already doing. When comparing the eight themes that emerge from the papers published (the ‘work’) with the three FRCs that mainly represent the type of studies that we want to do (the ‘challenges’), we suggest that four types of combinations emerge. These are:

1. Areas where we should continue work that are already an important part of what we do (for example childhood and adolescence, economic resources, social relations, working life);
2. Areas where we need to do more and perhaps better work (gender, migration);
3. New trends in society that we need to address (analysing present social and individual level changes, a tougher social climate); and
4. Areas or topics that are not represented in our ongoing work, nor brought up as research challenges.

As indicated already in the list above, issues relating to childhood and adolescence are seen as important future research challenges (FRCs), and these topics are also a prominent part of what we do presently. This may be interpreted as a need for a continued emphasis on this period in life and the institutions that affect it (the family, schools etc.).

The second group includes areas mentioned as FRCs that could possibly be tackled better, and be given more attention. Gender inequalities is an example of a topic that is often covered ‘mechanically’ through separate analyses of men and women, but where a more systematic analysis of gender inequalities is often lacking in our work to date. Similar arguments can be raised regarding research on ethnicity, immigration and immigrants, although these topics have emerged during recent years due to active prioritisation. From a strategic point of view, it is likely that an expansion and ‘improvement’ (theoretically as well as analytically and empirically) of research on topics where we are already active is an easier and more natural step to take than to open new fields of research.

On the other hand, the third category offers suggestions for topics and trends that could be important to pick up. To some extent, the more specific topics mentioned here might also be covered already, at least partially (as unemployment, transition from school to work and ‘new’ forms of social exclusion). Other topics mentioned are more novel, and it will be important to discuss those as potential areas of future studies.
Finally, it is important to point out a couple of topics that do not appear much in our present work, nor in our dreams. In particular, we want to point out that the later part of the life course, including health and inequalities during old age as well as inequalities in terms of labour market exits and pensions, are largely missing. Partly this is likely to be a result of a division of labour with the Aging Research Center and the Stress Research Institute respectively, where such issues are prominent. However, it is maybe not a division of labour that needs to be kept, in particular since issues regarding aging populations and the consequences for individuals and societies is a hot topic in for example Horizon 2020. Other topics that have not been mentioned include particular determinants like alcohol and tobacco.

Comparing CHESS’ and international panellists’ future challenges

We have asked the international panel what they believe are research challenges and knowledge gaps in order to use their responses as a point of reference to see if the themes extracted from their suggestions are different from the ones provided by researchers at CHESS. Similarities and differences in terms of knowledge gaps and research challenges are of interest because they can indicate to what extent CHESS’ research is likely to break new paths or establish new topics, or whether we are lagging behind the international research frontier. Either way, this comparison could guide us towards where we should be heading and what we should be researching.

It should be remembered that suggestions of knowledge gaps are also likely to reflect the social and research contexts of those responding. Therefore, it would not be surprising that the ideas on what constitute important questions and research challenges in health equity studies might differ between researchers from different countries and contexts.

However, quite a few themes and suggestions are essentially identical, i.e. both the international panel and CHESS’ researchers propose mainly the same knowledge gaps that need addressing. Sometimes the topics brought up are similar but the reasoning behind is rather different. There are also some suggestions that have only been brought up by one party. We have analysed the results theme by theme, and have then summarised the similarities and differences between the suggestions given by the international panel and researchers from CHESS.

Analytical approach- Here, there are many similarities. Both groups consider this an important theme where much focus should be put in the future. Both feel the need to incorporate more complex perspectives and deepening our understanding of why inequalities in health occur. However, even though our general opinions of these issues are similar, we emphasise different things. Both CHESS and the international panel agree about the importance of developing the intersectional perspective, i.e. looking at how characteristics coexist (gender, ethnicity etc.). However, the way it is discussed is rather different. CHESS researchers focus more on the importance of developing theory, terminology and methods while the international panel puts emphasis on the complexities of incorporating the approach in analyses. Interestingly, and related to this is that CHESS researchers focus greatly on gender and migration related issues. These themes are hardly ever discussed by the international panel.

In terms of more specific similarities, both groups mention epigenetics as an important field to look further into. Also, both groups express the need for collaborations with other sciences as well as with various actors in the field in order to develop theory, data and methodology. In addition, both CHESS researchers and the international panel suggest that a better understanding of the mechanisms behind health inequalities is needed. Behaviour, personality and agency is mentioned as important parts to
include in the analytical approach taken in order to move forward, both by developing theory but also in stressing the need for more and different data to conduct such analyses.

**Methodology, methods and measurement**- Intervention research is definitely a current topic for both the international panel and researchers at CHESS. The international panel focusses slightly more on the difficulties of evaluating the effectiveness of implemented interventions but also find the need for different kinds of high-quality interventions, as do researchers at CHESS. The international panel seek further developments in different methods of analyses and how we measure health inequalities and related subjects. CHESS researchers mention translational research and interventions, which links to many of the issues brought up by the international panel concerning planning, implementation and evaluation of various types of policies and social experiments.

**New features**- An important theme here is ‘change’. It involves changes in society and the need to keep up with the various transitions going on. This seems important for both research groups and is perhaps more intricately discussed by CHESS, at least when based on the level of detail and specificity of suggestions given. Generally, CHESS researchers focus more on sociological changes and the international list more medical and biological changes.

**Stratification dimension**- The knowledge gaps mentioned here relate to almost all other themes in various ways, but interestingly, this is only the case for the ideas provided by researchers at CHESS. These relate to gender stratification, ethnicity and migration and are, for CHESS researchers, considered to be highly prioritised. Ethnicity and migration are topics that are also mentioned by the international panel but not at all to the same extent. Even more differences can be seen when it comes to gender, which is widely recognised as a hot topic at CHESS but not mentioned at all by the international panel. There are many reasons for this but one obvious explanation is that many suggestions mentioned in these map diagrams are direct reflections of the current situation in the various countries that we live in.

**Determinants**- Suggestions here are described rather differently by the two groups and it therefore seems natural to organise the suggestions in different ways. Suggestions from CHESS researchers were largely based on key living conditions and social processes that operate as social determinants of health and inequalities in health. These include childhood conditions, the workplace and working conditions, income and economic resources, discrimination and social relations, to mention a few.

The international panel, on the other hand, either brought up the role of political and policy factors, or factors much closer to the production of health problems in individuals. Examples of policies mentioned include urban planning, health care, labour market institutions and child care measures, while more disease-adjacent factors include clustering of and interaction between specific risk factors, vulnerability, behaviours and individual variations within categories of socioeconomic status.

An interesting observation can be drawn from these differences in how CHESS researchers and international panellists view determinants and where the research challenges are in relation to the factors that contribute to inequalities in health. Where the international researchers tend to go very structural or very individual when they think about determinants, CHESS researchers are much more focussed on middle-range factors and institutions, such as the workplace, the family and key living conditions.

While the reasons for this are unclear, the observation is intriguing. In part, the focus on more individual level factors are brought up by CHESS researchers in terms of the need to more explicitly
address the role of human agency and the interplay between biological factors involved in the creation of health inequalities. The international experts’ focus on specific risk factors such as tobacco or obesity is not particularly visible in the responses from CHESS researchers. At the other end of the spectrum, the strong focus on politics and policies from the international panel is not really echoed from CHESS researchers, despite the fact that work involving the role of policies and welfare states is a part of what we do.

These differences in the various types of determinants regarded as most important suggest that researchers at CHESS are more focussed on middle-range institutions and social processes than the international experts appear to be. To some extent we might want to use this insight in our own research, for example by providing links to more general policy issues in our discussion parts. However, we also think that the middle-range approach which the CHESS responses represent is a strength that we should cultivate and develop, not least when we make an effort to continue and intensify theoretical work on social determinants for health.

In conclusion, we find that the research challenges and key knowledge gaps brought up by CHESS researchers are to a large extent also identified by the international panellists. In the cases where we see clear differences, primarily in terms of which types of determinants that are highlighted, we believe that the Research Positioning Exercise provides useful insights, and that the differences observed could be used to our advantage.
CONCLUSIONS

The first impression from the three stages of our Research Positioning Exercise is that it provides highly interesting and important knowledge. It is helpful to summarise the key themes of our present research, both to get an overarching impression of the combined output of our work, but also as a starting point for strategic discussions about our research profile. Such discussions are of course also well served by the more systematic approach to research priorities that our mapping of research challenges and knowledge gaps represent. We therefore hope that this presentation and analysis of the work that we do presently, and the research challenges that we have identified will together be useful for an ongoing discussion at CHESS regarding future research priorities, but also for the way we do and discuss our work in our research groups and at our seminars. We also hope that this exercise can become the first in a series of similar exercises recurring approximately every third year. We believe that it is important to visualise what we do in terms of output, as well as what we are thinking in terms of future research challenges, on a regular basis.

However, while these parts of the mapping should be read and discussed on their own merits, the most interesting part from a strategic point of view is the comparison between them. We have refrained from pointing out topics that we presently cover but that are not listed as FRCs, and have focussed on what type of studies that according to this comparison between present work and the knowledge gaps could be continued, expanded and addressed. These suggestions from our analysis are based mainly on our interpretation of the data presented here, but partly also on the discussions and feedback given during the discussions of the preliminary version of this report.

It is important to note that what we do is a matter of priorities – we cannot simply do all the things we do today and on top of that do something more, something better and something new, at least not without new resources in terms of funding and staff. Therefore, any serious discussion on how this positioning exercise might guide our future work and applications must balance new and/or intensified work with various cuts in other topics. Needless to say, this is easier said than done, in particular if the expansion and cuts affect different researchers or groups. The comparison between the suggestions from CHESS and the international panel has been helpful in order to sort out what issues can be left to others to work on and what we should probably take up. Essentially, this is something that we at CHESS need to have an ongoing discussion about, not least in relation to applications and at seminars, if we want to see real changes.

Having said that, we believe that we can identify a couple of points that primarily deal with how we do our research and what research fields we focus on the most. Hence, these things should be possible to incorporate in our ongoing development of the framing of our research in terms of ideas, hypotheses and models.

One clear example of this is the call for a stronger focus on theoretical development: From our internal responses it is clear that there is a strong interest in and demand for theory and theoretical development as an integrated part of the research that we do currently. This interest is echoed by the international panel, although we believe that CHESS researchers in some ways can be better positioned to carry this out. We draw this conclusion based on the detail and specificity of the suggestions provided by CHESS researchers.

What is it then that should be done more in terms of theory, and how can it be accomplished? Our interpretation is that the suggestions refer to theoretical development as an important tool to reach a better understanding of mechanisms and processes involved in the creation and shaping of health
inequalities. Hence, it is not ‘pure theory development’ that we should be engaged in, but rather making sure that our models, explanations and hypotheses are theoretically well underpinned. In doing so, social science theory may often form a basis, but such theories usually fall short of suggesting mechanisms into the body. Here CHESS has a unique position with insights and knowledge of different types of theories. In addition, the call for more theory is to a large extent an expression of a need to develop and strengthen our abilities to apply, refine, develop and combine theories from different fields in a way that makes it easier to understand the mechanisms and processes that we are studying.

While theory development in general is an important topic for future development, two specific issues seem to be particularly important for health inequalities research, namely the relation between social structures and human actions and behaviour on the one hand and the theoretical understanding of different dimensions of social stratification and their interrelations (in short intersectionality) on the other.

The latter point also leads to another example of where a stronger focus seems to be warranted, namely the dimensions of stratification that we use. During recent years we have started to do more research on migration and ethnicity. In light of recent refugee migration, focus on migrant groups is likely to be of increasing importance. Still, however, it appears that we do quite little on gender as a key stratification aspect, and in these areas there is clearly room to do more within the research programmes and projects that we are currently working on.

How, then, do we envisage that such shifts in focus or priority within existing topical areas at CHESS can be achieved? Primarily we believe and hope that the results and suggestions coming out of this Research Positioning Exercise will stimulate discussion and awareness about research content and issues like intersectionality, structure-agency and other themes brought up. This in itself would be important, in our view. More specifically, we think it would be good to encourage more comments on theoretical issues at our seminars, and to make sure that we give more equal weight to methodological and theoretical arguments when we discuss applications and papers at seminars, but also for example in future recruitment processes.

In addition to this, we want to comment on the themes that we are not working on, nor have pointed out as key issues for the future. These issues primarily involve the upper part of the life course, those aged 65 years of age and older, and health behaviours. Partly, these areas may be missing due to how we have classified the publications— it is possible that there are studies involving older people or alcohol use without these features being visible here. Still, it is important strategically to discuss and think about whether or not we should leave, for example, labour market exits and the link to health before and after leaving paid work to our colleagues at other research centres.

Finally, we want to stress that while we find the outcomes of our positioning exercise highly interesting and informative, we also firmly believe that the process of performing this mapping of our work and ideas for the future is as important, if not more important, than the end result. If this attempt to position what we do at CHESS in relation to what we consider to be important topics for the future can stimulate an on-going discussion of key issues in our field of research, we have succeeded.
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Appendix 1. Questionnaire sent to CHESS researchers

Which are the most important knowledge gaps in the research field ‘Inequalities in health’?
The research field ‘Inequalities in health’ has developed significantly during the past 15 years, both in terms of depth and width. As a result, knowledge on factors and processes that contribute to the emergence of inequalities in health across the life-course has also become more detailed and complex, and thereby also more difficult to grasp. Which are the main challenges and knowledge gaps that remain? What should research in the field of Health inequalities focus on during the coming 10-15 years?

The overarching goal of CHESS’ strategic plan for 2013-15 is to ‘retain and consolidate the position as a nationally leading and internationally renowned research institute in the field’, in other words in health inequalities research. In order to accomplish this we first need to identify the most important knowledge gaps and research challenges in the field as a whole. If we can do that we will also have a good basis for strategic decisions regarding research at CHESS.

We therefore want researchers at CHESS to take a moment to reflect and think freely on the research field ‘inequalities in health’ as a whole and identify the knowledge gaps that need to be filled in, in order to take decisive steps forward in terms of understanding and addressing inequalities in health:

1. Which are the most important knowledge gaps and research challenges in the health inequalities field in the coming 10-15 years? Think about the field as a whole and what kind of knowledge we need to deepen and improve, or where important knowledge is presently largely missing. Mention 2-3 challenges/knowledge gaps and motivate why you believe these are crucial for the progress of the field.
2. If possible, develop how you think that these knowledge gaps and challenges best can be tackled, for example which type of data or other resources that would be needed.

The replies and reflections we receive will feed into an internal discussion about our research and how we best can develop further. This discussion is important in its own right – we need an active discussion around major research issues at CHESS.

At the same time we also hope that the process will lead the identification of a number of central research challenges for the future which in turn can be related to what we are presently doing. This comparison can hopefully form the basis for strategic decisions, for example the direction of coming larger applications.

As Directors we hope that you are prepared to take some time and think over these big issues in order for us to collectively produce a basis for an important discussion around the scientifically and strategically most crucial research issues ahead of us.

Best wishes

Olle Lundberg and Jenny Eklund
Appendix 2. International expert panel

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Appendix 3: Clusters of knowledge gaps and research challenges for the future, CHESS
Appendix 4. Clusters of knowledge gaps and research challenges for the future.