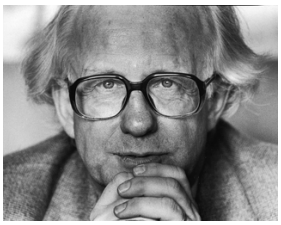
On The Limits Of Single-Issue Social Science

Max Weber – Illustration
by Ingrid Bouws

The state of the art of the social sciences at the end of the sixties of the past century was characterized by a strong mood of optimism.
The rediscovery of the critical roots of social sciences as exemplified by the work of Marx and Weber contributed to the idea that one of the main tasks of social science should be to unravel the dynamics of social inequalities and to demystify ideological legitimatizations of those inequalities. Besides, the development of analytical tools and the recognition of the fast growing capabilities of computer software that could process huge amounts of data offered new opportunities to study the complexities and dynamics of modern societies. The combination of theoretical ambitions and research-technical possibilities seemed to promise new ways for social research inspired by 'sociological imagination' (C. Wright Mills, 1967).

A well-known example is the ambitious project of The Club of Rome: a group of interdisciplinary researchers who aspired to develop a model encompassing a variety of social, economical, cultural and environmental factors to study the development and possible futures of the living conditions of societies, social groups within these societies, and mankind in general (Meadows, 1972). The

explicit ambition of Dennis Meadows and his colleagues was to combine a holistic approach with a well-founded research strategy using new analytical tools. However, the validity of their research results was rather limited due to the fact that the theoretical focus of their research was biased by a neo-Malthusian political agenda.



Johan Galtung

Another example is the project initiated by Johan Galtung to study structural inequalities within societies as well as between societies (Galtung, 1978). The '*Social Position Theory*' developed by Johan Galtung is also characterized by a holistic approach of the dynamics of societies and relations between societies: *The general aim is to study the combined effects of different types of social inequalities between Social Positions within societies and the way these effects are influenced by structural inequalities between societies*.
Of course, the state of the art of sociology at the end of the sixties was far more varied then summarized above. First, there were different viewpoints concerning the relation between critical ambitions and scientific goals of social science. The risk of politicizing social science constituted the major topic in these debates. Second, in empiricist research traditions there was scepticism about the holistic ambitions of grand theories. Third, in qualitative sociology and anthropology the idea of combining a holistic approach with a predominant quantitative research-methodology was viewed as unfeasible.
Nevertheless, the general mood in the sixties was dominated by the idea that the possibilities of new research methodologies could be used to study major social problems from a holistic viewpoint.

The sixties is almost half a century ago. So it is worthwhile to wonder about what has happened to the ambitious research agenda of the sixties concerning social inequality? What has sociological research since the sixties contributed to our knowledge of social inequality? To what extent are the expected promises fulfilled?

A review of recent literature on social research on social inequality is in several respects a disappointing experience. Of course, social inequality is still an important issue in social research and as a consequence there is an abundance of empirical studies of social inequality. Nevertheless, the growing quantity does not reflect a growing quality of our knowledge of the dynamics of social inequality.
Symptomatic is the fact that a holistic research agenda such as the one envisaged by the Club of Rome or its methodological approach have not acquired an influential position in sociological research in the western world.
The same is more or less true for the *Social Position Theory* of Johan Galtung.
Sociological research on social inequality is dominated by the tendency to focus on one or a few dimensions. Research agendas inspired by a holistic approach such as implied by the *Social Position Theory*, are virtually absent.
The reduction of sociological research on social inequality to 'single-issue' studies is the main topic of this chapter. First, the main traditions of empirical research on social inequality are discussed. Second, I deal with the epistemological, methodological background of social research and the social conditions of scientific production that privilege single-issue research practice. Third, the main weaknesses of single-issue studies are outlined. Finally, some strategies are discussed to overcome the weaknesses characteristic of traditions of single-issue sociology.

Current sociological research on social inequality
The mainstream of relevant empirical research in this field is focused on a specific type or form of social inequality. Interrelations between different forms of social inequality are either neglected or the focus remains limited to the relations between only a few different forms. Several research traditions can be distinguished.

Studies on social class
The most important research traditions on social inequality are focused on social class. The history of research on social class is in itself a good example of the

growing dominance of reductionist approaches to social inequality. In the first half of the former century it was more or less taken for granted that social class should be viewed as a multidimensional concept. In his famous studies on social class in American cities, Lloyd Warner developed a measurement instrument that was intended to capture the richness of different dimensions of what he called '*the status system*' (Warner & Lunt, 1942). Besides the main source of income (salary, private or public welfare, profit-earning from inherited or acquired capital) and occupational prestige, he also tried to measure cultural aspects of living conditions and life style such as the quality of the residence and the socio-cultural prestige of the environment. The inclusion of cultural indicators of class inequality was partly based on the well known studies of Stuart Chapin (1933) who developed the so called '*living room scales*' that focused on differences in life style by measuring items in the home. The general approach of Lloyd Warner was very much inspired by Karl Marx and Max Weber. As a matter of fact, the whole series on '*Yankee Cities*' can be viewed as an ambitious effort of Lloyd Warner to translate the theoretical notions of Marx, Weber and Sorokin in methodological procedures on behalf of the measurement of social inequalities. Lloyd Warner and his colleagues were not the only researchers who tried to capture the multidimensionality of class. Another example is Richard Centres (1949) who focussed on the relationship between criteria used to define different objective class positions and the subjective criteria used by the people themselves to distinguish different classes as socio-psychological groups. Centres used a variety of different criteria to measure objective class positions such as educational level, type of job, power, income, standard of living and social prestige.
A common denominator of research on class inequality in those days was a general awareness that power positions should be distinguished according to the type of resources that functioned as the powerbase. For example, power based on economic resources (i.e. economic classes) should be distinguished from power based on political resources, cultural resources or social prestige.

The issue of multidimensionality remains a relevant topic of theoretical debate throughout the sixties and seventies (Blau & Duncan, 1967; Goldthorpe & Hope, 1974; Parkin, 1972; Runciman, 1968; Svalastoga, 1959). However, in actual research on social class most attention focused on the occupational structure, especially on the way occupations can be used as indicators of positions in a general system of social stratification. This development had two important implications. First, social prestige became the main topic of social research on

class inequalities while other dimensions of social class disappeared to the margins of the research agenda. Second, the focus on occupational hierarchy implied that the measurement of social prestige was narrowed down to occupational prestige. In case other dimensions of class were included, very often the original theoretical concepts were also narrowed down on behalf of 'efficient' empirical measurements. For example, 'economic class' is often operationalized as income. As noted by Frank Parkin (1972) this is '*almost the antithesis of Weber's own much broader and more useful definition*' (Parkin, 1972. p. 31).
Up until now reductionism is characteristic of the current main stream of social research on social class. The ranking of professions along the social ladder is viewed as the preferred indicator of general social prestige (Ganzeboom et. al., 1992). However, the construction of an unambiguous ranking of professions is not without difficulties. Rankings of professions can vary over time and between societies. Even within a society there may be differences between socio-cultural groups. Last but not least, occupational prestige of a profession is also dependent on gender characteristics of those who exercise that profession (Van Doorne-Huiskes, 1984). To circumvent those complexities, educational level is often used instead as a measure of social prestige.

Main Topics
There are two main topics within the tradition of social class in terms of occupational prestige. First, the effects of social class on the living conditions of individuals occupying different class positions. Especially income is used as an indicator of those living conditions. Second, mobility between classes. The research agendas concerning these topics are rather straightforward: they include changes in effects of social class over time and changes in mobility over time. Comparative studies about the differences between societies with respect to effects of social class and the mobility of social class constitute a growing field (Ganzeboom et al., 1992).
In the research tradition in which social class equals occupational prestige, attention is paid to the interrelation between social class and some other forms of social inequality. Mainly due to feminist criticism of male-biased research traditions in studying social class, the interrelation between social class and gender receives more attention than it did some decades ago (Blees-Booij, 1994). However, the attention for these interrelations is still rather marginal. As Blees-Booij rightly argues, up until now '*the position of women as subject of stratification research is even worse than their position on the labour market*'

(op.cit. p. 53).
Besides the mainstream research on occupational prestige, there are approaches in which the concept ‘social class’ refers to positions within the relations of production (neo-Marxian tradition; see for example: Erik Olin Wright, 1979, 1985) or to general relations of power (conflict-sociological approach; see for example Dahrendorf, 1959). Especially within the neo-Marxian tradition the interrelation between class, gender and race is considered a relevant research topic (Erik Olin Wright, 1979).
However, empirical research based on neo-Marxian or conflict-sociological approaches of social class constitute a marginal position in comparison with the vast amount of social research on occupational prestige.

Gender studies and the study of race relations
Since the seventies gender studies has become a more or less accepted branch of sociological research. Gender studies filled the gap left by the dominant sociological approaches. It goes without saying that the main focus of gender studies is on different aspects of gender inequality. There is a growing interest in the interrelations between gender inequality and other forms of inequality. First, in order to tackle the blind spots of male-biased research traditions in studying social class, the interrelations between inequality of class and gender inequality is part of the research agenda of gender studies. Second, in the eighties another branch of sociological research emerged. Students of this approach criticized gender studies for underestimating the structural differences between the Social Positions of black women and those of white women (Kimberley Crenshaw, 1989).
In order to overcome colour blindness, the concept of intersectionality was introduced in gender studies as a central category of analysis (Leslie McCall, 2003). This concept focuses on the intersection of different forms of inequality and is based on the assumption that the study of gender inequality requires that interrelations with other forms of inequality be taken into account. This approach has led to interesting empirical studies. For example, Leslie McCall (2001) studied how gender, race and class differences interact and intersect in different economic conditions.
Notwithstanding the promising possibilities of this development, a holistic approach, which aims to encompass all relevant forms of social inequality, is still absent in gender studies and the study of race relations (see also: Lutz, 2002). Intersectionality remains restricted to the interrelation between gender inequality and racial inequality or inequalities of social class (Albeda, Drago & Shulman,

2001; Andersen & Collins, 2000; Gruski, 2001; Johnson, A. 2001; Rothenberg, 1992; Smith, 2005).

Studies of age discrimination and relations between age groups

Along with class, gender and race, age is one of the key components of structured inequality especially in industrialized societies. In comparison with the other components age discrimination is the least acknowledged issue. As a consequence structured inequality between age groups is a rather new field of social research (Macnicol, 2006). The research in this field is mainly focused on the effects of age on job opportunities, and mobility within or between classes (Bessey & Ananda, 1991). The question of how age intersects with other forms of social inequality, such as gender inequality and inequality of social class, has not yet received much attention.

Cultural studies

A rather recent phenomenon is a research field that is dominated by a culturalist viewpoint on inequality. Of course, the unequal disposition of cultural resources constitutes an important form of social inequality. And culture may play a decisive role in reproducing and/or transforming relations of inequality. But unfortunately, the research agenda is often based on the exclusive attention towards cultural inequalities. A major example is the revival of the '*culture-of-poverty*' theory developed by Oscar Lewis in the sixties of the former century (Lewis, 1966). This approach is not only an example of narrowing the theoretical focus down to a specific form of social inequality, i.e. social inequality due to cultural differences. This approach is also an example of theoretical imperialism. The ambition of the culturalist viewpoint is far from modest. It pretends to explain all other forms of social inequality. As a consequence culturalist theories on social inequality fulfil ideological functions by justifying structural inequalities. Very often, research from a culturalist viewpoint boils down to produce blaming- the-victim theories on social inequality (Dalrymple, 2001).

International studies

The study of the relation between different states constitutes a separate branch of social and economic research. Power relations between states are the main focus of these studies. But there is a tendency to focus on specific aspects of those power relations. Especially within economics there is a substantial branch of research that focuses on economic differences between the Centre and the Periphery between and within countries (Hout & Meijerink, 1996; Köhler, 1998).

Holistic studies that focus on the interactions between political, military, economical and cultural power relations are scarce (but see: Samir Amin, 1977, 1980). Holistic studies of how interstate relations of inequality affect structural inequalities between social groups within states are virtually absent.

On the popularity of single-issue sociology

The brief summary of the current state of art of sociological research on social inequality does pose the question how to explain the general tendency to focus on one form of social inequality or the interrelation between just a few different forms or dimensions? Why is single-issue sociology so prominent and why is multi-issue (or better: multidimensional) sociology so absent?

The answer is that single-issue sociology as a social practice is stimulated by a variety of factors. In this section the theoretical, epistemological and methodological characteristics of mainstream sociology that contribute to single-issue sociology are more closely examined.

The decline of 'Grand Theories' and the rise of Empiricism

In mainstream sociology, the self-restraint to focus on one specific form of social inequality (racial inequality or gender inequality, or inequality due to social class or social prestige, etcetera) within a specific domain (e.g., labour relations or family relations) is viewed as a way to guarantee to conduct research meticulously. It is believed that, in order to avoid the pitfalls of 'Grand Theories', empirical research should be limited to those phenomena that can be measured in standardized procedures.

The 'grand stories' about society are viewed as something of the past. As a consequence, the theoretical and empirical contributions of those scientists who try to understand the dynamics of historical developments of social formations and the structural relations characteristic for those social formations such as Marx, Weber and Sorokin are marginalized (see also: Johan Galtung & Sohail Inayatullah, 1997). Holistic approaches are distrusted as either indefensible forms of reductionism or untestable forms of theoretical speculation. Even the term 'holism' as such is often associated with just 'bla,bla'. According to this view, the complexity of modern or post-modern society should focus on empirical testing of hypotheses of survey-able phenomena. The rules for scientific publication stimulate research practices that fit in with this narrow empiricism. Ironically, this empiricism is often presented as '*theory driven research*' because the hypothetic-deductive method requires that research should start from testable

hypotheses. However, it is seldom argued how theoretical premises from which those testable hypotheses are deduced, fit in with a more general theoretical framework.

The dominance of Methodological Individualism

Besides empiricism, the mainstream of research on social inequality is either implicitly or explicitly based on methodological individualism. The 'fait social' is viewed as the sum total of the interactions of individuals. This viewpoint is nicely summarized by the well-known one-liner of Margaret Thatcher: '*Society doesn't exist*'. As a consequence, social inequality is conceptualized in terms of differences between individuals, who possess different amounts of assets (income, prestige, etcetera). From this viewpoint inequality is essentially a ranking of individuals based on some type of asset. The focus on research of separate ranking systems is conceived of as a necessary prerequisite to build up a more complete representation of the combined effects of different forms of social inequality. How the construction of a complete representation should be achieved, is seldom reflected. Our hypothesis is that most researchers assume or dream that this goal will be achieved somewhere in an unspecified future by combining and adding results of specialized single-issue research.

This dream is based on a very simple concept of causality: *Causality is viewed as linear and additive*. Of course, there is some attention for possible interactions of different causal factors. But the baseline of the general research strategy is the assumption that additive causal relations are the rule and interactions are the exceptions to the rule.

From a holistic viewpoint this dominant concept of causality is inadequate for several reasons. First, causal relations should be conceived as fundamentally context-dependent. As a consequence, the real meaning of single-issue research is always uncertain, because this context-dependency is seldom studied. Second, a holistic approach implies a dialectical view on the causal relations between structure and agency. The aggregate of structural relations of social inequalities determines the live chances of social actors occupying the distinguished positions in these relations. But those relations are also reproduced and transformed by those actors. Gender, race, and social class are social constructions and the meanings and boundaries of gender categories, racial categories and class divisions are object of social struggles.

Besides the inadequacies of the dominant concept of causality, the ranking

concept of social inequality that dominates single-issue research underestimates important structural characteristics of social inequality. From a holistic viewpoint a relational concept of social inequality is more appropriate. A relational concept of social inequality implies that inequality is characteristic of relations between interdependent structural positions. Social inequality is primarily about positions and only secondary about the individuals occupying these positions and their mobility between positions.
To summarize, methodological individualism neglects the specific nature of social reality: Social reality cannot be reduced to the sum of contextually independent causal relations between individual characteristics constructed by single-issue research.

Arbitrary eclecticism & reductionism
The '*grand*' theories are not completely absent from the current scene of social research. But the way in which conceptual frameworks developed within these theories function within research on social inequality is rather ambivalent. General theoretical concepts, that are part of those frameworks, are used to legitimize the research in question. At the same time however, these concepts are often reduced to very specific aspects of the phenomena under study.
A good example of this form of eclecticism is the use of Bourdieu's theoretical framework in current social research on social inequality. In fact, Bourdieu is one of the last inheritors of the tradition of 'grand' theories who is still rather popular in the field of empirical research on social inequality. His work is much cited. But the interest remains restricted to only one of the three main forms of 'capital' distinguished by Bourdieu, namely: *social capital*. And even this form is often reduced to a position in a social network in a specific field (labour organization, friendship relations, etcetera).
The other side of the coin of theoretical eclecticism is theoretical reductionism, i.e. the assumed predominance of a specific form of social inequality. In the seventies of the former century, social inequality in terms of social-economic classes constituted the main focus of empirical research. Mainly due to neo-Marxist theories, this focus was often legitimized by the claim that socio-economic class is the 'ultimate' decisive factor in explaining al kinds of social inequality. This type of reductionism can also be found in some feminist approaches of social inequality and in some approaches in the field of race relations.
Since the nineties of the former century, a new branch of reductionism has acquired a dominant position in the field of social research on inequality: the

study of the cultural roots of social inequality. This approach is part of a more general theoretical focus on the assumed importance of cultural phenomena in social changes. The concept of identity plays a central role in these developments. Identity construction is at the forefront of theoretical work and scientific debate. And identity politics seems to replace traditional concepts of politics concerning structural change. These developments run the risk to result into a new form of reductionism in which cultural identities are viewed as 'basic'. As a consequence, Social Position and structural inequality are neglected as important factors determining social and cultural developments. An example is the popularity of the '*culture-of-poverty*' theorists, who claim that social inequality is mainly due to cultural characteristics of the lower classes.
Another example is the influence of the '*Clash of Civilizations*' theory in the field of international relations between western societies and non-western societies (Bernard Lewis, 1993, Samuel Huntington, 1993). International conflicts are explained in terms of assumed cultural homogenous societal formations classified by labels such as 'The Western World' and '*The Islamic World*' or just '*The West*' versus '*The Rest*".
To summarize, the twin sisters '*theoretical eclecticism*' and '*reductionism*' constitute a major force in the legitimization and promoting of simplifying single-issue sociology.

On the social conditions of single-issue sociology
The popularity of single-issue sociology is partly due to the way sociologists construct aims, norms and methods and the way in which they develop and use specific epistemological assumptions and methodologies to legitimize their research practices. But the popularity of single-issue sociology is not merely the outcome of the sum of preferences and convictions of individual researchers. Social research is embedded within scientific institutions and is also partly dependent on features of the broader social and political context. Therefore it is worthwhile to scrutinize how single-issue sociology is related to general institutional as well as political characteristics of the context of social research.

The institutionalized labour division in social research
In most western countries, a strong labour division within social sciences has gradually emerged. As a consequence, social research is divided along disciplinary boundaries and within each discipline research is further divided along different domains and themes of social research. That labour division is

firmly institutionalized and conditions the development of social research and the (im) possibilities of interdisciplinary cooperation. Unfortunately the prevailing segmentation and fragmentation of the academia constitutes optimal conditions for the strategy of single-issue sociology. Different forms of social inequality are studied in different organizational contexts. Socio-economic departments restrict themselves mainly to inequality in terms of social class and/or social prestige. As a consequence, gender studies are often organized within separate departments and the same is true for other forms of social inequality, such as the study of race relations. Inequality in interstate relations is furthermore the privileged object of departments of international relations, etcetera. From a historical point of view this organizational structure of scientific research is understandable, but one of the unintended effects of the prevailing division of scientific labour is the reproduction of single-issue sociology. Besides, research fields that do not fit in with these institutionalized divisions run the risk of being marginalized or removed. For example, peace-studies focuses on the unravelling of the complex dynamics of socio-economic, cultural and political forces that constitute the conditions for the development of violent conflicts and for their solution. Therefore, peace-studies is only viable as an interdisciplinary practice that transgresses traditional boundaries between disciplines. The dominance of organizing scientific research within separate disciplines constitutes a barrier for the development of peace-studies.

The social norms regulating the production and productivity of research activities
During the last decades of the former century general norms were developed to control and measure the productivity of research groups and individual researchers. The norms in the field of social research are mostly copied from those traditionally used in the natural sciences. These productivity rules make it more attractive to produce short articles about specialized topics than to write lengthy books in which complex research is presented. Nowadays social scientists as Weber or Sorokin, who spent years to write voluminous interdisciplinary studies on the development of societal formations, would not survive in modern academic institutes. Besides, the quality journals require articles in which a few well-developed hypotheses are tested. As a consequence, these social norms privilege single-issue sociology.

The political interest in key factors on behalf of managing social change
Government agencies and private companies play an important role in financing

social research. Policy makers are often only interested in finding just a few crucial key factors as instruments for policy measures. Moreover, the general public discourse has also a tendency to frame social problems in simplified terms. It is rhetorically attractive to explain social problems by focusing on just one of the possible explanations. Both tendencies make it tempting to reduce social research to single-issue studies. An example is the growing focus on cultural aspects of social relations between immigrants and native inhabitants in western societies. This corresponds with the public discourse on cultural differences as '*the*' cause of racial or ethnic inequalities. In other words, the practice of social research tends to adapt to the dominant culturalist discourse in society and in the political scene while critical research is marginalized.

How to overcome single-issue social science?

In the sections above we outlined the theoretical foundations of single-issue sociology and the conditions that favour social research that conforms to the rules of single-issue sociology. In fact single-issue sociology constitutes an elaborate discourse in the sense of Foucault (1969, 1971): It is not just an ideology or a way of thinking, talking and evaluating social research; it is also materialized in institutionalized forms of social practices and the norms that rule research practices. These practices fit in with the wider social context (policymaking practices, the practices of the mass media and the institutionalization of social research).

This makes it difficult to overcome the deficiencies of single-issue social by developing new ways of studying social reality from a holistic viewpoint. It is not only necessary to construct new research strategies. It is also imperative to create social conditions that make these strategies viable.

In this paper I only deal with the problem of research strategies. It is possible to distinguish between two main roads that aim at studying social inequality from a holistic viewpoint.

Developing and renewing the ethnographic road

Research from a holistic viewpoint has always been one of the hallmarks of qualitative research, especially ethnography. But in the history of anthropology, ethnography has gradually developed from a general research strategy into a specific strategy mainly used to study small communities within a society such as cultural groups in urban neighbourhoods. The advantage of these small-scale ethnographic research designs is that the complexity of interrelations between

different types of social inequality can be studied in-depth while taking into account the context-dependency and the dialectics of complex causal processes. This strategy plays a considerable role in gender studies that try to capture the dynamics of the intersection between gender inequality and other forms of inequality. In the research practice of gender studies two variants of this strategy can be distinguished.

First, this strategy is used to scrutinize the complexities of the lived experience of a social group whose living conditions are determined by the intersection of different forms of social inequality. Leslie McCall (2003) labelled this approach as '*intra-categorical*'.

Second, within a post modern approach this strategy is used to deconstruct the way the social group is categorized by questioning the boundary-defining process itself. Leslie McCall (2003) used the label '*anti-categorica*l' to characterize the latter approach. From the viewpoint of a holistic approach such a division between structure oriented and agency oriented research strategies is rather unfortunate. To unravel the dialectics of processes of reproduction and transformation of structural relations of inequality, one should combine both strategies.

A common feature of the different strategies following the ethnographic road is the tendency to focus on particular social groups at specific points of intersection between different relations of inequality. In this respect intersectional oriented ethnographic research fits in well with traditional characteristics of ethnography in general. Ethnography is often equated with a research design focused on the micro-worlds of the social life of a single group. Multi-case designs focused on a comparative study of different social groups constitute the exception to the rule of single group studies.

But there is not a methodological restriction to use the ethnographic approach in a multi-case design to study the general dynamics of a society as a whole. In terms proposed by Leslie McCall, such a multi-case design is compatible with an inter-categorical approach.

A well-known example of such an inter-categorical approach is a nationwide study on the effects of social inequalities on social life: *the ambitious research project led by Pierre Bourdieu on social suffering in contemporary society* (Bourdieu, 1993). The concept of social suffering does not only include poverty but all kinds of deprivations and feelings of failure. The research of Bourdieu and his colleagues aims at how the combined effects of different forms of social inequalities and aspects of living conditions are experienced by individuals and

contribute to different kinds of suffering. This holistic ambition is realized by conducting a series of ethnographic studies of the life of different individuals and their families living in very different social and physical spaces. Each of these studies is based on in-dept interviews and observations. The results that are presented in an extensive publication makes it possible to create a general representation of how different forms of social inequality interact and function in the daily life of ordinary people in French society at the end of the eighties and how these people cope with these inequalities. Of course, this is a labour-intensive research design, but the strategy followed by Bourdieu and his colleagues could be further developed by combining this type of qualitative case studies with quantitative data about the social conditions in the society to be studied.

Developing and renewing the Social Position Theory

A second road that is compatible with the inter-categorical approach is the development of a quantitative model based on a holistic approach of social inequality. This research strategy could depart from with the theory of Social Position as developed by Johan Galtung at the sixties. Before this approach is elaborated, it is necessary to review the dimensions of inequality as conceptualized four decades ago. New social developments (such as the recognition of the inequality of access to natural resources) and new theoretical insights (such as the proto-theory for the empirical study of social inequality developed by Veit-Michael Bader and Albert Benschop (1988) should be taken into account in the re-conceptualization of the different dimensions of inequality. The proto-theory of Bader and Benschop is an important step in the development of an all-embracing holistic theoretical framework for the analysis of structural inequalities. It breaks through the compartmentalization of social research in separate disciplines or even sub-disciplines and it overcomes the limitations of narrow-focused research traditions.

Up until now, the scientific community largely neglected the important study of Bader and Benschop. There are a few exceptions. Benschop himself conducted an extensive study to develop an integral theory of social class (1993). Inspired by the proto-theory of Bader and Benschop, Helma Lutz (2002) proposed to incorporate, besides gender, class, race and ethnicity, other forms of structural inequality such as age, state of health, environmental conditions, cultural resources, possessions, state of societal development, and position of the society in international relations (‘North-South’ and ‘East-West’).

Of course there are other possibilities to conceptualize the different forms and dimensions of structural inequalities.

Besides conceptual innovations, new analytical tools should be introduced to unravel the complexities of the interactions of different forms of social inequality. The original Social Position Theory proposed a research strategy that aims at the construction of an overall index that is conceptualized as the sum total of positions on dimensions of social inequality. Such an index assumes an additive causality. Fortunately, there are new research possibilities to take into account conditional causality that is characteristic for social reality. Different analytical techniques are developed that can be used to analyse the complexities of the intersection of different forms of inequality. For example, in case of large datasets multi-level research may be used to analyze context dependency of the way different forms of inequality intersect. In case of comparative studies of a limited number of groups, regions or countries, the research tools and analytical procedures – known as the Comparative Method and developed by Charles Ragin (1994) – can be useful to analyze the dynamics of the way different forms of social inequality interact in social life of individuals. The Comparative Method is based on the assumption that any research strategy should take into account that conditional causality is the rule and that the simple model of additive and linear causal relations is the exception to the rule. That assumption fits in quite well with the general approach of the Social Position theory as outlined by Johan Galtung (see chapter 2 and 3 in this book).

To summarize, new theoretical insight as well as new research techniques enable the development of the conceptual framework and of the methodology of the Social Position Theory. This helps us to tackle the complexities of the modern social world and the combined effects of different forms of social inequality.

Conclusion

In this paper I outlined the consequences of current research traditions for research on social inequality. Especially the dominant position of single-issue social science constitutes an obstacle that impedes substantial progress of scientific knowledge. Of course, in-depth research that focuses on a detailed study of a very specific phenomenon can be very important. But if single-issue research becomes paradigmatic for the way social research in general should be carried out, then real progress of knowledge will turn out to be fictitious. Unfortunately, the dominant position of single-issue social science is very well institutionalized within social science.

However, dominance is never complete, and can be challenged. Therefore it is important to discuss possible research strategies that can overcome the deficiencies of single-issue sociology. In this paper, two different strategies are discussed. One strategy departs from the virtues of the ethnographic method and tries to avoid the limitations of traditional ethnographic research. The other strategy departs from a holistic conceptualization of social inequality and the virtues of quantitative modelling and analytic procedures.
In fact both strategies could be combined. Such an approach would fit in with the growing interest in mixed method research. The development of such a combined strategy could constitute a serious challenge to the dead-end road travelled by single-issue social science.

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Edutainment Radio Programmes

The ways in which journalists frame HIV stories can strongly contribute towards news consumers' perceptions of the epidemic. This paper discusses the news values of HIV radio programmes in Ethiopia, Kenya and South Africa. It argues that the culturally appropriate 'humanisation' of HIV stories and the proper use of conflict as adding news value are paramount to the impact of stories.

The skillful application of news values can make almost any HIV-related story newsworthy and therefore part of mainstream news. Moreover, it is maintained that HIV advocacy environments contribute to the newsworthiness of HIV stories in the media.

The AIDS advocacy milieus of South Africa and Kenya are compared and related to the type of HIV stories that are published and broadcast in the respective countries. Journalism training methods are critically discussed in the context of the above. It is argued, that, in developing countries, where journalists often lack basic journalism skills, it is not sufficient to provide reporters with HIV-related information; HIV information sharing should be combined with general journalism training and mentoring.

Introduction

In December 2007, an excited Bashir Osman – a Somaligna-speaking journalist from Dire Dawa in the east of Ethiopia – broadcast a live call-in show on breastfeeding and HIV to his Somali audience on Dire 106.1 FM. According to the most recent Ethiopian government figures, Dire Dawa has the second highest HIV prevalence rate in the country, and almost doubles the national average. Each year there are almost 1, 000 HIV positive pregnancies with at least 230 children born with the virus. Yet this was the first HIV programme that Bashir had ever produced. AIDS was so stigmatised in the region that Dire 106.1 FM hardly ever discussed it on air. And Osman had no problem following this route. A week before the broadcast, the journalist – like most of his listeners – refused to be in the same room as people with HIV because he *"didn't want to risk breathing the same air"* (Osman cited in De Masi, 2008) as them. He would never consider sharing a plate, or hosting an HIV positive person in his home, and thought it a deep insult to be tested for the virus.

But then Osman accessed what turned out to be a precious piece of culturally relevant information: he learned that babies of HIV positive women can get infected with the virus through their mothers' breast milk (personal communication, December 6, 2007). All mothers with babies in his community breastfed their infants x including his very own wife. His own five-month old baby could be at risk, he perceived with shock, because neither he nor his wife knew their HIV status. The realisation changed Osman's entire view on AIDS, and HIV was suddenly a virus that had the potential to directly impact his own life and those of everyone else he knew, in ways he had previously vehemently denied (personal communication, December 6, 2007). In short, this piece of information

made AIDS newsworthy to Osman, his community and his editors. It became something that was crucial and worthwhile to talk about.

HIV and the News Media

Several communication experts, AIDS activists and journalists (Collins, 2005; Kinsella, 1989; Malan & Gold, 2006; Scalway, 2003; Shilts, 1987) have argued that the news media have the potential to be an immensely powerful tool in the response to HIV. According to the Joint United Nations Programme on HIV/AIDS Executive Director (UNAIDS), dr. Peter Piot, *"journalists can save more lives than doctors in terms of HIV prevention because preventing HIV is about communication and changing norms"* (Piot, 2006).

Proving statements like this, however, is very complex; studies have not been able to conclusively show that stories in the news media have resulted in change in HIV-related behaviour on a large scale. Research has, however, strongly suggested that news stories are capable of setting the framework in which citizens discuss public events. McCombs and Shaw (1972) demonstrated that there was a strong relation between the topics that the news media highlighted during an American election campaign and the topics that news consumers identified as important. Another US study illustrated the power of broadcast news to set the policy agenda when it proved that evening news bulletins had the effect of defining the policy areas by which the president should be judged (Iyengar et al., 1984).

McCombs and Ghanem (2001) have argued that *"the level degree of emphasis placed on issues in the mass media influences the priority accorded these issues by the public"* (cited in Reese, Gandy & Grant, 2001, p. 67). Dearing and Rogers (1996) stated that this proposition had been supported by more than 200 studies. But, I would argue that the regular publishing or airing of stories on a certain subject does necessarily lead to the public taking note of that subject. If such stories do not directly relate to the lives of readers or broadcast audiences, or are not presented in captivating ways with strong news values, they are unlikely to influence news consumers' opinions – whether negatively or positively. In the case of a highly stigmatised and sensitive subject such as HIV/AIDS, even more so.

Osman broadcast an interview with an HIV positive woman in her mid-twenties. Her name was Meskerem. He met her at an HIV journalism training of the media organization, Internews Network, that he was attending. Meskerem was mother to a baby that was HIV negative because she had used freely available drugs that

helped to prevent her baby from becoming infected. Doctors advised her not to breastfeed – unless she could do so exclusively (i.e. without feeding the baby anything other than breast milk for five months followed by a total halt to breastfeeding).

"*When my listeners heard the woman speak about breastfeeding and HIV, everyone started to send text messages from their cell phones*", Osman says. "*Like me, they wanted to know that their babies wouldn't get harmed by HIV*" (personal communication, December 10, 2007).

The information was directly relevant to the lives of the people of Dire Dawa. Moreover, it was presented with a "*human face*", and told by an HIV positive Ethiopian mother herself. And, on top of that, a strikingly attractive and presentable young woman that Osman acknowledged he initially could "*not believe was infected with HIV because she looked so healthy and vibrant*" (personal communication, December 10, 2007). The interview was followed by a live call-in show with an in-studio specialist HIV nurse who answered callers' questions or text messages. Most people who phoned or sent texts were desperate to know what they needed to do to protect their babies (Osman cited in De Masi, 2008; personal communication with De Masi, June 29, 2008). The nurse's most common answer was to tell mothers to get themselves and their babies tested for HIV.

Previously, Osman hardly got any strong audience responses. In many of his programmes – on other topics – he talked almost exclusively. But his HIV programme was different: it framed the AIDS pandemic in a human and culturally relevant way. The fact that it contained a local woman with HIV who was mother to an HIV negative baby, and that the dangers of breastfeeding were explained to a "*breastfeeding society*", is what made it of cultural relevance and ultimately newsworthy. Had Osman done his programme in the usual way, by inviting government spokespeople to rattle off statistics on health related subjects, his audience response is unlikely to have been the same. In his words: *They would have been their usual self, and not respond at all. I've realised those statistics alone don't move them. It's the human face and bringing out something that directly impacts them, that makes all the difference. Prior to this program, I didn't think it was possible to make HIV newsworthy. I thought people just didn't want to hear about it any longer* (personal communication, December 10, 2007).

Influencing audiences

Bernard Cohen (1963, p. 13) has encapsulated the news media's agenda-setting

function in a much quoted statement: “[The press] may not be successful much of the time in telling people what to think, but it is stunningly successful in telling its readers what to think about”. By this, he meant that the news media can influence the topics news consumers talk and think about, but don’t necessarily determine their opinions on those subjects.

However, some scholars find Cohen’s statement misleading. Entman (2007) argued that it is impossible for the media to tell consumers what to think about without also exerting considerable influence over their opinions on the subjects they think about. Entman contended that *“getting people to think (and behave) in a certain way requires selecting some things to tell them about and efficiently cueing them on how these elements mesh with their own scheme systems”* (Entman, 2007, p. 165). Moreover, Malan (2006) has asserted that the South African news media did in fact tell the public what to think with regards to AIDS policies (that they “lack comprehensiveness”) and antiretrovirals (that they *“are effective and should be made available”,*) in the late nineties and early 2000s. In the case of Osman’s radio program, the media or experts on his programme told listeners to “get tested for HIV” and “not breastfeed their babies for longer than six months if they test HIV positive”.

Stories can obviously also negatively impact societies, sometimes resulting in media consumers thinking the “wrong” things. In March 2004 one of Kenya’s major national dailies, The Standard, published a front page story on HIV tests arguing that the rapid tests used in VCT centers – which enable clients to receive their test results on the same day – were inaccurate. The news quickly spread when one of the most popular Nairobi based radio stations, Kiss FM, picked up on the story in its morning news bulletins. Most other radio stations followed suit. The story was covered by every major newspaper, radio and television network throughout the week, by using a strong news value: conflict.

It became an issue of extreme concern to AIDS organizations operating in Kenya. Although HIV testing experts were eventually quoted, and they explained why the stories were incorrect and that the tests were indeed accurate, the damage had been done. According to Emma Mwamburi, a USAID programme officer responsible for managing the US government’s support to HIV testing in Kenya, several VCT centers all over Kenya reported a drastic decrease in their clientele for months after the publication and broadcast of the stories. Many Kenyans demanded to be tested with the expensive HIV kits that were used in hospitals at the time (ELISA tests). It took 3 days to get results from such tests, as analysis had to be completed in laboratories. This made the ELISA tests considerably more

expensive to carry out than rapid tests; yet they were no more accurate.
Upon subsequent investigation, it was established that the source of the initial story that had painted the rapid tests as inaccurate was based at a company that had previously made large amounts of money from production of ELISA tests. When it was realised in Kenya that cheaper rapid tests were just as accurate as ELISA tests, this firm began losing its previous profits. Hence its spread of a false story, and one that did tremendous damage for a very significant amount of time.
It is therefore extremely important that journalists access accurate HIV information and are trained on how to use this information effectively. Inaccurate information presented with strong values and in captivating ways can potentially grasp the attention of news consumers in similar ways to accurate information.

Media and society
Researchers such as Garfinkel (1967), Goffman (1974) and Berger and Luckman (1967) have argued that news does not mirror society, but rather helps to shape it. These researchers have maintained that, when journalists describe events, they actively define those events by selectively attributing to them certain details or particulars. They have contended that news stories define what is *"deviant"* in society and what is *"normative"* and that news acts as a selective *"window on the world"* (Tuchman, 1978, p.1).
Osman's report defined what was *"normative"* – namely breastfeeding – and what was *"deviant"* – namely talking about HIV and knowing your HIV status. Once the culturally-relevant information – that the breast milk of infected mothers can infect their babies – had been shared, knowing ones' HIV status became *"normative"*; it became necessary to get tested for the virus as it could impact on ones' babies' health.

The culturally relevant framing of his programme encouraged Osman's listeners to ask questions about HIV and think about the potential impact of the virus on their own lives. In the media analyst Robert Entman's (2007) words, "it raised the salience or apparent importance of certain ideas", in this case a virus that no one in the community dared to talk about and journalists at Osman's radio station certainly did not address on radio. This is reflected in the number of call-ins/text messages his programme received: almost triple that of any of his previous radio programmes (that did not address HIV). The enhanced interest was an indication that the culturally-relevant way in which he framed HIV appealed to his listeners and significantly increased HIV-related discussion. So much so that Bashir ended

up doing two follow-up radio programmes on the issue and managed to sustain a high level of audience participation.

There is a common perception that HIV has been over-reported and that audiences are *"sick and tired"* of it. But an audience perception study by the University of the Witwatersrand in South Africa seemed to dispel this myth, at least as far as a Durban township is concerned. Kwazulu/Natal, the province in the east of the country, in which Durban is located, is often referred to as the *"AIDS capital of the world"*. AIDS is regularly covered in the city's local news media. Surprisingly, Jooste (2004) found that respondents didn't think AIDS was over-reported, but rather that they weren't hearing or reading enough of the right type of stories.

Jooste analyzed the responses of 200 people in Cato Manor, an informal settlement in Durban. Ninety eight per cent of them said they wanted more reporting on HIV-related matters in print and broadcast media. When Jooste asked them what "kind" of reporting they wanted, 80 per cent indicated they were desirous of *"more about people like us"* or *"more about people living with AIDS"*. The researcher discovered that the stories respondents could recall most often were *"people-centered"* stories. A number mentioned the child activist, Nkosi Johnson – even though he had died about a year earlier – and Gugu Dlamini, a Durban woman who was killed two years earlier for revealing her HIV status. *"Both old stories"*, but they were *"the ones best remembered"*. In the case of Osman's program, more than half of callers' text messages and call-ins referred to "Meskerem's story". One read: *"How did Meskerem know she was positive?"* and another read *"How did Meskerem know how to help her baby?"*

These listener responses confirm Jooste's findings: that media consumers remember *"people-centered"* stories and identify better with reports about *"people like us"*. The fact that an Ethiopian mother with HIV told her story herself helped listeners to identify with the issue and "defined a problem worthy of public attention" (Entman, 2007). In stark contrast to Osman's HIV radio program, an AIDS programme on a major Ethiopian broadcaster seems to have had very little effect. It rarely receives any text messages or call-ins and according to producers, listeners seem to remember very little HIV-related information from it. While this programme is broadcast biweekly, thus regularly, the contents don't seem to attract listeners – it consists of presenters reading HIV-related information and shocking statistics live on air and medical or government officers explaining strategic plans and scientific information. It rarely humanises the epidemic or makes it culturally relevant to listeners, and often relies on sponsorships, as it

hardly ever attracts advertisements.

Lucy Macharia's programme

A similar radio story of Kenyan journalist Lucy Macharia (not the journalist's real name; her identity is being protected as her sister is not yet comfortable with being public about her HIV positive status) in 2005 also illustrates the news value of HIV programmes with a human face. Lucy attended a media workshop that focused on Voluntary Counseling and Testing (VCT). When she learned about the symptoms of HIV-related illnesses, she strongly suspected that her sickly sister was infected with the virus.

The radio programme that Macharia produced related her own experience of having visited a VCT centre to get tested for HIV. It was broadcast on the Catholic radio station, Radio Waumini, for which she worked at the time. She asked her sister to listen to the broadcast and also took it home on CD so that her sibling could listen to it repeatedly. Like Osman, Macharia's programme began with a human interest feature followed by live call-in show with an in-studio expert, in this case a VCT counselor, that addressed callers' questions. The human interest feature related Macharia's fears when she waited for her results. Part of the script read:

I don't need to tell you what I feel. My mind is drawing pictures of what the test kit looks like with my blood on it. Is there one or two lines? One red line means negative, two means I'm positive". But it also explained the help she received: "But Bancy, the counselor, speaks to me. She makes me feel safe. She tells me that it's important to know your HIV status. It helps you to protect yourself (Macharia, 2004).

Similar to Osman's story, Macharia's programme '*humanised*' HIV for her listeners. It enlivened the issue, taking it away from the cold realms of words on paper, and far away from scientific lectures given by *"dry"* experts who were the usual participants in such shows and who never connected with radio listeners and hardly ever elicited great response. The fact that Macharia went for an HIV test herself and openly and humbly spoke about her fears when doing so and allowed listeners a *"look"* into an HIV testing room.

The human framing of the programme *"defined a problem worthy of public x attention"* (Entman, 2007) and raised the importance of going for an HIV test. This is reflected in the kind of call-in questions the programme received – the three most common call-in questions were: *"How did you feel when you went for*

the HIV test", *"How do I get to go to the same HIV testing centre as you?"* and *"How did you know that the test was accurate?"* (personal communication, April 30, 2004).

Previously, said Macharia, her listeners had regarded the tests as *"something out there that other people, but not me, do"*. After the programme it changed to *"something that Macharia has done"* and listeners should therefore consider doing as well. After listening to Macharia's program, her sister asked her to accompany her to get tested for HIV, at the same place as Macharia had undergone such a procedure. And, on the morning that they subsequently visited the specific VCT centre, Macharia's sister did, indeed, test positive. According to Macharia, the *"biggest factor"* in convincing her sister to get tested for the virus was the fact that Macharia herself had been tested and that she had the opportunity to first hear *"what happens in a counseling and testing room. Having heard what a counselor says to you"* and hearing the sound on the air of an actual testing kit being opened and used *"is what made all the difference"*. Macharia says it in fact gave her sister the *"courage"* to finally overcome her fear and face up to the reality that she was HIV positive (personal communication, May 5, 2004).

Two follow-up radio programmes on this issue proved that some of Macharia's listeners seemed to have the same experience as her sister when listening to the programme. A week after the broadcast of the first programme – on a Sunday morning – four listeners called into Macharia's next programme reporting that they had gone for HIV tests as a result of the first programme and requested to relate their experiences on air. Moreover, Macharia's news editor was so convinced by the programme himself, that he allocated her airtime for a weekly HIV programme and had the entire staff meet with a VCT counselor who he invited to visit the radio station.

Prior to this program, Macharia had produced at least eight HIV programmes that had not resulted in a single call-in. Instead, she reported, it seemed as if her listeners wanted to *"stay away"* from the issue. She believes one of the main reasons for this is the fact that her programme didn't make use of strong news values, and never humanised HIV:

I always presented HIV as something out there for other peoplexsomething that didn't have a face and certainly didn't impact on me. When I changed that, the response to my programme changed. I started getting listener reactions – often more reaction than to programmes I produced on other much more accessible subjectsxI realised listeners aren't tired of HIV, they're just tired of the way in

which we present it (personal communication, May 5, 2004).

'A Stitch in Time' (Kenyan Broadcasting Corporation)

One more example of an HIV programme that has used *'humanisation'* as a news value is that of the radio presenter/producer team Ann Mikia and freelancer Sammy Muraya from the Kenyan Broadcasting Corporation's (KBC's) weekly HIV/AIDS programme *"A Stitch in Time"*. In fact, it seems to have led to government action and strongly impacted on policy change. In August 2004 Mikia and Muraya decided to tackle a difficult topic which was not being addressed by the Kenyan government's AIDS programme. The radio team focused on matatu (minibus taxi) touts and drivers and the schoolgirls who were exchanging sex with the drivers and touts for free rides to school or money. Muraya took to the streets and recorded interviews with matatu drivers and touts, schoolgirls and also with officials from the Matatu Drivers Association (Muraya, 2004).

He produced a five- minute radio segment that was followed by a live call-in session between listeners and representatives from the National AIDS Control Council (NACC) and the Drivers Association (Malan, 2005). Muraya's human-interest report raised and defined a problem *"worthy of government attention"*. (Entman, 2007). In addition to this, the programme was framed in a culturally relevant way. The story raised many questions about the lack of government intervention with regards to transactional sex, a common occurrence in Kenya that most people know of. The representative from the Matatu Drivers Association followed up by asking the National AIDS Control Council (NACC) to commit to action on air. The NACC could not deny any of the problems that were raised in the programme as they were confirmed by the schoolgirls and matatu drivers themselves. One girl in the report admitted that *"They [the matatu drivers] have sex [with us] and disappear just like that"*.

In December 2004 the team did a follow-programme about the issue, reminding the NACC that the problem had still not been addressed and asking them to explain on air why that was the case. Angry listeners called in to ask *"Why is this happening?"* and why nothing much was being done about it, while the girls and matatu drivers themselves were admitting to this happening. Then, in May 2005 – six months later – the government launched a matatu drivers HIV/AIDS programme for which they set up a special voluntary counselling and testing (VCT) centre for matatu drivers and provided HIV/AIDS counselling specifically targeted at them. The drivers were also provided with stickers with AIDS

prevention messages to display in their taxis. According to NACC spokesman, Abel Nyagwa, the radio programme *"A Stitch in Time"* was a key player in improving relations with the Matatu Drivers Association.
The radio team's culturally relevant and human interest framing of this story played a strong role in actively shaping the government's perception of the extent of the matatu crisis that eventually led to action and *"activate[ed] schemas that encourage[d] target audiences to think, feel and decide in a particular way"* (Entman, 2007). It also encouraged listeners to respond in ways that put pressure on the government to take action.

Journalism training and mentoring
Producing compelling HIV programmes is not something that comes without considerable journalistic skill. In this section the role of media training and mentoring of journalists in developing countries are discussed in the context of the production of quality HIV radio programmes.

Challenges and limitations
Mikia, Osman and Muraya followed a well-tested method of radio production, albeit as yet uncommon in the developing world: to begin their radio programmes with focused, theme-based human interest radio features, followed by live call-in shows with in-studio experts. It is indeed a relatively straightforward radio production method x But it is one that requires a considerable amount of journalistic skills and resources that these three journalists would not have mastered, nor had access to, without their having attended intensive media training workshops and receiving ongoing mentoring from highly experienced journalism trainers at an international media development organization.
But it is not only HIV-related knowledge that is required to tell such stories successfully. A significant amount of journalistic skill is needed in order to produce news media content that carefully interlaces aspects of the epidemic with "*case studies*" – people and communities which the virus has impacted – and to still be able to make it newsworthy. As a radio journalist you need to understand, and write well enough, to present *"life with HIV"* in a way that makes news consumers realise how it affects them as well.
In addition to this, radio producers and presenters need access to telephones and the internet for research, computers with digital sound editing programmes and recording equipment – facilities that are rarely available at under resourced radio stations in poorer countries.

Training and access to resources

All three journalists received access to all of these facilities for the production of their programmes by each attending a weeklong HIV feature story production workshop at Internews Network's Local Voices programme. The programme follows a training method different from that of most other HIV media training programmes, with a 70 focus on the development of radio journalism skills and only 30 on HIV knowledge. Other HIV media trainings generally approach this very differently, mainly focusing on nurturing HIV knowledge and not journalism skills. At seven days duration, Local Voices workshops are also considerably longer than others, which are generally two to three days. It also trains no more than 10 journalists at a time. All trainees leave the workshops with a ready-to-air radio feature and outline with questions and research for the live call-in show that is to follow the broadcast of their human-interest stories.

During their respective workshops, the journalists learned how to write good scripts, to structure stories, to digitally edit sound and to use appropriate HIV language. They met and interviewed people with HIV and visited pregnancy and HIV testing centres where they recorded natural sound and interviews with counsellors. During the production of their stories, they were carefully mentored by experienced radio journalists who specialised in HIV reporting to ensure quality. Each of them received access to recording equipment while on the training and received their own equipment after the production of five post workshop HIV stories. Mikia has also received several travel grants to produce HIV stories outside of her home city, Nairobi.

A combination of this training approach and access to facilities enabled them to produce HIV stories with human and culturally relevant frames. Without the training and relevant facilities doing this successfully would have proved unlikely, as they would not have had access to phones and research facilities to find the *"human"* faces of their stories and not have known how to effectively weave them into their programmes.

Advocacy environments

HIV advocacy environments can significantly contribute to the newsworthiness of HIV stories in the news media. The stories of Osman, Mikia and Muraya were produced in an environment where many other inaccurate HIV stories, like the previously mentioned rapid test/VCT example, are being published simultaneously. The rapid test story was for instance published a mere week ahead of Lucy Macharia's programme on HIV testing. This resulted in several

conflicting messages competing with each other in the media.
Traditional approaches to analyzing news that argue that the news media reflect society without having much influence on shaping that information, hold some water, when one considers the influence of AIDS advocacy environments in the case of Kenya and South Africa. Although none of the abovementioned stories were aired or published in South Africa, the diverse civil societies of Kenya and South Africa are a good example to address *"advocacy environments as a contributing factor to the framing of stories*".
South Africa and Kenya have two very different civil societies. South Africa's AIDS activists are extremely vocal and proactive, holding regular protest marches and issuing almost daily press releases. In Kenya, advocacy groups are not nearly as visible and do not place as much emphasis on developing personal relationships with journalists. The ability of civil society organizations and advocacy groups to make their voices heard and present their views in a newsworthy manner, makes a vast difference to what ends up in the news media (Malan, 2005).

When the VCT story about rapid tests broke in Kenya, radio journalists had access to very few HIV testing experts they felt comfortable enough to phone at 6 am in the morning to get a comment on the newspaper article that had appeared that same morning. As a result, comments with accurate scientific information that could counter the information in The Standard's erroneous article was only obtained and reflected much later that day, and in some cases only later that week. So, for a significant amount of time, the Kenyan public only had access to harmful information regarding HIV testing.
In South Africa, on the other hand, the largest AIDS advocacy group, Treatment Action Campaign, in many cases dictates what appears in the news media. The group frames its opinions in newsworthy ways and TAC spokespeople are available to the media on short notice at almost any time of the day. As a result, the movement's views are widely quoted in the local news media and scientifically inaccurate news reports and statements are instantly addressed. Several studies have indicated that the TAC is quoted more than any other source in the South African media – and that includes the government (Spur, 2005; Finlay 2004). The TAC uses newsworthy tactics such as protests, civil disobedience and public confrontation of government ministers to keep journalists interested in what they do.

An example of this would be the opening day of the fifteenth International

Conference on HIV/AIDS in Bangkok, Thailand when South Africa's Health Minister, Dr. Manto Tshabala-Msimang, told journalists that the drug Nevirapine (a cost-effective drug used to prevent mother-to-child-transmission of HIV) was unsafe to use (Brummer, 2004). Two years prior to the conference, South Africa's highest court had ordered Dr. Tshabalala-Msimang to make the drug available, free of charge, to HIV positive pregnant women and their babies. The Minister had displayed resistance to the order ever since. Within a few hours after the Minister's statement, the TAC, AIDS Law Project (ALP), and Medecins Sans Frontieres (MSF) held an emergency mass meeting for South African AIDS activists, health workers, scientists, and journalists attending the conference. The story, along with reactions from local non-governmental organizations, that challenged the minister's statements, was headlined in almost every major newspaper and broadcast on regional and national radio and television stations throughout the country (Malan, 2005). Local NGOs and scientists were furious, insisting that statements such as Dr. Tshabalala-Msimang's undermined their efforts to educate South Africa's citizens about prevention against HIV infection. Ultimately, Zackie Achmat, who headed the TAC delegation to the conference, convinced the conference organizers to give the TAC an opportunity to speak at the Thursday morning plenary session, to plead for access to Nevirapine for HIV positive pregnant women in South Africa, and for scientists like Dr. Tshabalala-Msimang to distribute accurate information about the prevention of mother-to-child transmission. In the presence of thousands of participants, the TAC asked session Chairperson Graca Machel, the esteemed Nelson Mandela's wife, to speak to South Africa's Health Minister.

This incident, in which prejudicial and incorrect information was disseminated, and then refuted by activists, is a clear example of NGOs taking on the responsibility of informing the media and the international community of the facts. The result was responsible media coverage which reflected the quality and efficacy of the activist environment of the country. As a result of this activism, policy or human rights issues relating to HIV appear far more often in the South African than in the Kenyan media (Malan, 2005). In this regard, NGOs, government spokespeople, academic researchers, doctors and AIDS advocates from countries that do not have adequate media liaison skills need as much training as the journalists themselves. They need to be taught how to relate to the media, how to assist reporters to access information, and sometimes they even need to be trained on how to make resources such as transport to some of their projects available to journalists. It is not just the responsibility of the media to tell

the story of HIV; the people who produce the research on this epidemic have a responsibility to make it available to society through the news media.
The media training programme in which the journalists who produced the radio programmes discussed in this chapter participated, includes this aspect; at least 10 HIV spokespeople are trained in effective media relations for every 30 journalists trained in the countries where it operates (Kenya, Nigeria, India and Ethiopia). Media relations trainings are five days in duration, with trainees holding an actual media event attended by journalists on the final day. The reasoning behind this approach is that it doesn't make sense to train journalists on how to interview activists and local government spokespeople, NGOs and PLHIV networks if those people are not available to the media as a result of their lack of understanding of the sector.

Conclusion
A combination of strong journalism skills, HIV knowledge and an environment conducive to telling stories about AIDS are essential in empowering the media to assist in the response to HIV. Culturally relevant stories *"with a human face"* can be incredibly powerful, as shown by the case studies discussed in this chapter.
In all of the three human-interest radio programmes that were discussed, the human and culturally relevant framing of the programmes resulted in listener responses that actively engaged with the subjects addressed, whether that was HIV testing, protecting your baby from HIV infection or transactional sex between taxi drivers and school girls.
In the context of HIV and of an increasingly competitive news world, it is no easy task to get airtime for an HIV story and to make an HIV-related human-interest story newsworthy, accessible and accurate. At a media panel at the International AIDS Conference in Toronto in 2006, the Wall Street Journal Science reporter, Marilyn Chase – who had been reporting on HIV for twenty years – echoed this concern: *"As the pace of the epidemic matures, our challenges as reporters get more complicated. Editors get choosier about stories. And that means many projects which are worthy may not be deemed newsworthy. That requires us, as reporters, to be smarter and more strategic in uncovering unique angles that make clear what really are the breaking, compelling news developments in the epidemic"* (HIV science and responsible journalism media panel, 2006).
Reporting on subjects other than HIV/AIDS is often considerably simpler. There is more often than not less science to understand, issues are less sensitive and not as much work and skill is needed to produce good stories.

There are several HIV journalism trainings happening in Africa. But some training organizations ignore the importance of training reporters as much in journalism skills as HIV knowledge. Simply giving journalists access to a vast amount of AIDS-related information by slapping together one speaker after another rarely makes a difference to their reporting. Journalists need more than that – they need to improve their journalism skills, and they need time and money to travel to access the *"human faces"* or case studies, and research, that will help them to tell compelling HIV-related stories.

In this regard a recommendation is that more journalists are intensively trained in *"humanizing"* the HIV pandemic. Journalists from all mediums (print, television and radio) should be trained, but, as radio is the most accessible media form in most African countries, it should receive the most attention.

It is also important to provide journalists in Africa with access to facilities and mentors to produce quality HIV stories. Sending journalists back to under-resourced media houses where there are no facilities to create human-interest stories after a training workshop, is counterproductive. If there is no access to facilities, journalists will not be able to effectively apply the skills they were taught in the training. They also need to be mentored by a senior journalist with significant HIV reporting experience to further develop workshop skills.

Moreover, it is the responsibility of the news media, training institutions, activist communities, scientists and governments, amongst others, to cooperate to ensure that the information surrounding HIV given to the public through journalists' stories leads to the saving, and not the endangering, of lives.

The programme topics in Osman, Mikia and Muraya's HIV radio programmes were not addressed as a result of advocacy communities raising their importance; it was journalistic skill and research that motivated reporters to focus on these subjects. Other than in South Africa, reporters in Ethiopia and Kenya can rarely rely on AIDS advocates to identify relevant "news frames" for them.

As shown by the comparison between Kenya and South Africa, the advocacy environments in which reporters file their stories can significantly contribute to the accuracy and creativity – or the opposite – of journalists HIV stories. It is therefore equally important to also train communication teams from government, PLHIV networks and non-profit organizations in effective media relations. The more conducive HIV advocacy environments are to HIV reporting, the better the chances are that creative and accurate stories with *"human and culturally appropriate faces"* will appear in the media.

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What Will Be The Long-Term Development Of The Population Of The German Reich After The First World War? – Introduction and

Abstract

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General Introduction
The 1920's and 1930's are among the most interesting periods in the history of modelling and forecasting. The continuous decline of Western birth rates in the inter-war period set alarm bells ringing. Concerns about the future size and growth of the populations of these nations were heightened by long-term extrapolations of time series, and by population projections and population forecasts. Concerns turned to acute anxiety after it became to appear that the leading Western European nations would not replace their populations. The imminent population decrease threatened to diminish the relative power of what were called in those days the 'civilized' nations and ultimaltely to result in 'race suicide' (the extinction of populations).
In some countries statisticians, demographers, or economists developed population projection methodology in order to free current debates on the population issue from emotional, subjective argument. In the two leading Fascist countries – but in other countries as well – population numbers were seen as the key to economic, political and military strenght.

From the book *Populations, Projections and Politics. Critical and Historical Essays on Early Twentieth Century Population Forecasting. Edited by Jochen Fleischhacker, Henk A. de Gans and Thomas Burch*, The Rozenberg Quarterly already published the essay by *Henk A. de Gans – The Innovation of Population Forecasting Methodology in the Inter-War Period: The Case of The Netherlands.*

As second essay from the book we present: *Wie wird sich die Bevölkerung des Deutschen Reiches langfristig nach dem Erstem Weltkrieg entwickeln? Die ersten amtlichen Bevölkerungsvorausberechnungen in den 1920er Jahren.*

In this essay Jochen Fleischhacker discusses the first official population forecasts of the German Reich in the 1920s. After the end of Wold War I concern in the German Reich increased that a slowing/deteriorating growth of population could have lasting consequences for society and the economy. This concern was based on population forecasts computed by official Reich statisticians in the 1920s. These calculations were primarily based on the initial demographic position of Germany after the end of World War 1. A quantifying of future demographic developments/trends was founded on different assumptions relating both the natural increase and to migration. Fertility trends before and after 1918 became a center of interest. The question of future demographic development influenced by this continuously decreasing birth rate was a focal point of the authors of the first official population forecast published by the German Statistical Office (Das Statistisches Reichsamt) in 1926.

Following the ideas of the American biologist Sir Peter Brian Medawar (1915-1987), one could say that forecasters were led by the illusion that the complexity of the factors which influence fertility behaviour could be summed up in only one number. Measurements such as the net reproductive rate (NRR) became the numerical expression of the fertility behavior of the population. Differential fertility became a central feature of the demographic forecasts and was used for constructing “high and low quality” sub-populations, for instance for invalids and widows. This social classification was seen as associated with differences in the reproductive behavior, and as having direct implications for population policy. These 1926 projections showed clearly what high social costs the German Reich was going to face. Various possibilities in the realm of social and family policies were discussed in order to get a grip on the declining birth and fertility rates. Suggestions for material and non-material support of families and for securing the social situation of the ageing population of Germany were broadly discussed after 1930. Surprisingly enough it is hard to find any previous studies of this discussion.

Abstract: **What Will Be The Long-Term Development Of The Population Of The German Reich After The First World War? The first official population forecasts in the 1920s.**

This article will acquaint the reader with the first demographic forecasts of the national statistical office of the German Reich, which were carried out in the 1920s. I will discuss the major changes in the age structure of the population of Germany during and after the First World War. In addition, I will analyse the

calculation models used and the results, in addition to sketching out the implications for population politics.

The First World War meant the end of steady population growth and also the end of a balanced age structure of the population (*cf. Graph 9.1, see Article = referring to the article by Prof.dr. Fleischhacker published next to this abstract-* – Age structure for the German population after the census from 1925 and the present area of territory after 1919 (Altersaufbau der Bevölkerung im Deutschen Reich nach der Volkszählung 1925 und dem Gebietstand nach 1919)) During the war years the population decreased by 5.9 million, dropping to a level of "just" 61.9 million. Demographic development was disrupted by the war in several ways: there were drastic reductions in the number of marriages and births, increases in the average age at marriage for both men and women and, of course, an enormous increase in mortality for young men. The official statistical reports summarised the changing age and sex structure of the population with the words: "more adults, but fewer children".
Comparing the statistics of 1925 to those of 1910, the percentage of children under 15 decreased by 17.9% and that of 15 to 65 year-olds by 20%. At the same time the percentage of people over 65 years of age increased by 25.6%. Between 1914 and 1919 there were approximately 3.3 million fewer children born than would have been normal. Declines in the birth rate were also a standard feature of post-war times. In 1912 the percentage of children under 15 of the total population was 33.9. This dropped by 1925 to 25.8%.

Losses in the male population affected the age groups above 20. They led to a long-term imbalance in the sex structure of the population in the form of a large excess of women *(cf. Graph 9.2, see article* – Numbers of people who died or soldiers killed in action in age groups (in 1000) (Die im Weltkrieg gefallenen und gestorbenen deutschen Militärpersonen nach Altersjahren (in 1000)). This phenomenon had a significant influence on marriage trends. In 1913 the average age at first marriage was approximately 27.5 for men. It rose to 29.0 by 1919.
The corresponding figure for the female population rose in the same period from 24.7 to 26.0. According to statistical estimates there were about 870,000 fewer marriages during the war years than one normally would have expected. As a result, birth rates dropped from 27.1‰ in 1913 to 22.1‰ in the years from 1921 to 1925.
Against the backdrop of these disturbances in the structure and total size of the

population the German statistical office produced its first population forecasts in 1926. They predicted that shifts in age structure would determine demographic trends for the coming decades. Their aim was to forecast population growth and developments in birth rates for the period from 1925 to 1975 (*cf. Graph 9.3, see article*– Marriages, Birth and Death in Germany, 1. First quarter 1913 -3. quarter 1925 (per 1000 inhabitants) (Eheschliessungen, Geburten und Sterbefälle im Deutschen Reich, 1. Vierteljahr 1913 – 3. Vierteljahr 1925, (auf 1000 Einwohner))).

They assumed constant age-specific mortality rates over this period. In addition, they assumed a closed population. Age-specific marital fertility was considered the decisive factor influencing future population developments. Mean values of age-specific fertility were calculated for the respective five-year child-bearing age groups on the basis of average marital fertility in the years 1924-1925. The degree of participation of the respective five-year age group in annual marital fertility was determined along with the size of the child-bearing age groups. The change factor for the marriage trend was calculated under the assumption that the proportion of married women in all age groups would change to the same extent as the entire stock of female population. The forecasts were carried out for three hypothetical cases of development. In the first case the annual number of live births within wedlock from 1925 to 1927 remains constant at the level of 1923. In the second case marital fertility remains at the average level of live births calculated for the years 1924 and 1925, taking into consideration the number of live births in 1923. In the third case marital fertility sinks from the average of the years 1924-1925 at a decreasing pace by a total of 25% up to the year 1955. After that marital fertility remains constant.

The results of these three different forecasts show the extent to which the number of live births and marital fertility is influenced by the age structure of the female population of childbearing age *(Graph 9.4, see article* – Number of births and marital fertility combined with the three assumed development
cases. Assumption: I Number of births is constant to 1975; II marital fertility is constant to 1975; III marital fertility is declining to 1955 at 25% and after this period constant (Zahl der Lebendgeborenen und die eheliche Fruchtbarkeit gemäss den drei für die Berechnungen angenommenen Entwicklungsfällen)).
The calculations exhibit noticeable changes particularly in the third case. As a consequence of the significant decrease in marital fertility and the structural

changes stemming from the entrance of the numerically weak birth years of 1915 to 1919 into the age group with the “highest fertility”, the annual number of births drops constantly. This trend determines the long-term demographic development, leading to an uneven age distribution and to altered population dynamics. In all three cases of potential development there is a decrease in population growth, which occurs more or less rapidly, however,depending on the individual case (*cf. Graph 9.5, see article* – Development of the total population from 1925 to 1975 with the three assumed development cases. I Number of births is constant to 1975; II marital fertility is constant to 1975; III marital fertility is declining to 1955 at 25% and after this period constant. (Die Entwicklung der Bevölkerungszahl von 1925 bis 1975 unter der Annahme I, II und III)).
On the basis of the forecasts of the total population the Statistical Office made calculations for the development of the corresponding birth- and death rates for the period 1925-1975.
These forecasts show once again, in all three cases, a rapidly aging population (*cf. Graph 9.6, see article* – Development of Births and Deaths (in 1000 of the total population) (Die Entwicklung der Geburten- und Sterbeziffer (in 1000 der Bevölkerung))).

A second, entirely new forecast was carried out in 1930 for a period of over 75 years. The main focus was on the downward trend in births and fertility in the postwar years. This development was interpreted as a “conscious will to limit the rearing of children”. The substantive question was whether future demographic developments would be characterised by wavelike drops in the number of births resulting from the combination of structural changes and waning reproductive behaviour. To estimate future population development a calculation model was chosen for evaluating the interaction of age-structure and average rates per women. Changed individual marital fertility behaviour is viewed as the most influential component. A trend is calculated for marital fertility for the entire female population of childbearing age for the years 1922 to 1927. For purposes of determining standardised fertility rates, structural influences and the changed age structure of women of childbearing age or fluctuations in economic trends are not taken into consideration. In order to be able to judge the changes in marital developments, one first determined the proportion of married women of childbearing age.

First, one calculated standardised age-at-marriage figures for the male population

in relation to marital frequency for the years 1910/1911, in order to be able to calculate the difference between expected and actual marriages for each age group in the years 1924 to 1927. The connections between altered marriage frequency and reproductive behaviour of the entire population were determined on the basis of data on marital trends in Prussia. Taken in reference to marriage duration and birth parity of the first, second, third, fourth and further births, these data show a decline in first and second births for the years 1922 to 1927. Mortality assumptions for the forecast, were based on the German life table for 1924-1926, and age-specific mortality figures were taken to be constant over the projection period. Emigration and immigration flows were excluded from the calculations.
To calculate the birth and marital fertility trends two hypothetical cases were formulated.
In the first case (A), the annual number of live births remains equal to the number of live births in the year 1927.
In the second case (B), marital and extra-marital fertility declines from the level of 1927 by a total of 25% by 1955. The shifts in age and sex structure of the population stemming from the First World War continue wavelike into the future under the conditions of both hypothetical cases. The transition of the boom years (people born between 1905 and 1909) from middle age to the over-65 age group means an increase in the percentage of elderly (*cf. Graph 9.7, see article* – Changes in the composition of age groups which are influenced through the ageing of the present total population (Veränderungen in der Besetzung der Altersklassen durch das Altern des gegenwärtigen Bevölkerungsbestandes)). The relative number of people married drops after 1940, as the low-birth generation born during the war moves into the age groups with the highest marriage frequency.

The results of these three different forecasts show the extent to which the number of live births and marital fertility is influenced by the age structure of the female population of childbearing age (*Graph 9.4, see article* – Number of births and marital fertility combined with the three assumed development cases.
Assumption: I Number of births is constant to 1975;
II marital fertility is constant to 1975;
III marital fertility is declining to 1955 at 25% and after this period constant (Zahl der Lebendgeborenen und die eheliche Fruchtbarkeit gemäss den drei für die Berechnungen angenommenen Entwicklungsfällen)).

The calculations exhibit noticeable changes particularly in the third case. As a consequence of the significant decrease in marital fertility and the structural changes stemming from the entrance of the numerically weak birth years of 1915 to 1919 into the age group with the “highest fertility”, the annual number of births drops constantly. This trend determines the long-term demographic development, leading to an uneven age distribution and to altered population dynamics. In all three cases of potential development there is a decrease in population growth, which occurs more or less rapidly, however,depending on the individual case (cf. Graph 9.5, see page 172 – Development of the total population from 1925 to 1975 with the three assumed development cases.
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II marital fertility is constant to 1975;
III marital fertility is declining to 1955 at 25% and after this period constant. (Die Entwicklung der Bevölkerungszahl von 1925 bis 1975 unter der Annahme I, II und III)).
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developments, one first determined the proportion of married women of childbearing age. First, one calculated standardised age-at-marriage figures for the male population in relation to marital frequency for the years 1910/1911, in order to be able to calculate the difference between expected and actual marriages for each age group in the years 1924 to 1927. The connections between altered marriage frequency and reproductive behaviour of the entire population were determined on the basis of data on marital trends in Prussia. Taken in reference to marriage duration and birth parity of the first, second, third, fourth and further births, these data show a decline in first and second births for the years 1922 to 1927. Mortality assumptions for the forecast, were based on the German life table for 1924-1926, and age-specific mortality figures were taken to be constant over the projection period. Emigration and immigration flows were excluded from the calculations.

To calculate the birth and marital fertility trends two hypothetical cases were formulated. In the first case (A), the annual number of live births remains equal to the number of live births in the year 1927. In the second case (B), marital and extra-marital fertility declines from the level of 1927 by a total of 25% by 1955. The shifts in age and sex structure of the population stemming from the First World War continue wavelike into the future under the conditions of both hypothetical cases. The transition of the boom years (people born between 1905 and 1909) from middle age to the over-65 age group means an increase in the percentage of elderly (*cf. Graph 9.7, see article* – Changes in the composition of age groups which are influenced through the ageing of the present total population (Veränderungen in der Besetzung der Altersklassen durch das Altern des gegenwärtigen Bevölkerungsbestandes)). The relative number of people married drops after 1940, as the low-birth generation born during the war moves into the age groups with the highest marriage frequency.

The surplus of women in the age groups 25 to 50 leads to an increase in the number of so-called late marriages. To calculate the number of live births and marital fertility, a third case of potential development (C) was added: marital and extra-marital fertility remains constant at the level of 1927.
Above all in this third case, one sees that transition of the generation born in the low-birth years of 1915 to 1919 into childbearing age from 1935 to 1945 introduces a decrease in the number of births. These trends continue into the future as well.

Graph 9.8, see article – Numbers of Births and Development of Fertility (Zahl der Lebendgeborenen und Geburtenhäufigkeit) shows the development of case A in relation to the number of births and of case B in relation to marital fertility from 1927 to 2000. In case A marital fertility drops up to 1935 at the same rate as the number of live births rises, assuming constant marital fertility. Comparing the curves for the number of births and of marital fertility, we see that as early as 1927 the level of marital fertility was too low to keep the annual number of births constant. The consequence of a marital fertility level that is too low is wavelike drops in births, which are greatest under the conditions of the second case (B).
The population dynamics inherent in case B lead to a loss of population starting in 1945 (*cf. Graphs 9, see article* – Expected development of the total population in the German Reich (Voraussichtliche Entwicklung der Bevölkerungszahl im Deutschen Reich) and Graph 9.10 Expected changes of the age structure of the total population (Die voraussichtlichen Veränderungen des Altersaufbaus der Bevölkerung)). The birth surplus drops until it reverses into a surplus of deaths in the year 1945. The drop in population that starts in 1945 accelerates thereafter. The constant decrease in the number of births means that each age group will be smaller than the one immediately preceding it. As a consequence, a new population structure is formed with "an urn that narrows as one moves downwards" and whose base becomes ever narrower (*cf. Graph 9.10, see article:* The white structure means the population structure for assumption A; the black structure means the population structure for assumption B). The different shapes in the age structure of case A and B have in common the fact that both exhibit an ageing of the population in general. In case B, this process is notably more dynamic: the actual birth rate and the population dynamics independent of the age structure of the population was calculated on the basis of stationary and stable population models. The Statistical Office used the theoretical methods developed by Alfred J. Lotka (1880-1949) for the calculation of the stationary and stable population model.

Instead of the NRR (Net Reproduction Rate), which was developed by Lotka, the Statistical Office calculates the value J which is approximated to NRR. Then the value J is calculated in order to prove these assumptions: the future development of total numbers of life births and the birth rate. The results
give a different picture of the replacement of the generation of mothers with the generation of daughters, as well as the decline of total population and the ageing process of the population (*cf. Graph 9.11, see article* – Development of Birth and

Death rates (per 1000 of the total population) (Entwicklung der Geburten- und Sterbeziffer (je 1000 der Bevölkerung))).

In case B the transition from a birth surplus to a death surplus occurs already in 1936, and the population begins to shrink. The long-term effects of imbalances in age structure and of the changes in reproductive behaviour on the part of the female population on population dynamics and size are portrayed in the theoretical population model of a stable age structure. The statistical office carried out separate calculations based on the examples of population trends regarding invalids and widows, as well as of (widows') pensions. They show clearly what high social costs the German Reich was going to be saddled with.
Various possibilities in the realm of social and family policies were discussed in the interest of getting a grip on the declining birth and fertility rates. For example: changes in the system of compensation for families with many children, various models for increasing the tax burden of childless couples and singles while lowering the burden for families with children, and the introduction of subsidies for the rearing of children in families with two children. These allowances were intended as a financial incentive for having a third child. There have been hardly any studies of the broad discussion of suggestions that took place after 1930 for the material and non-material support of families and for securing the social situation of an ageing population. It remains for future research to close the gap of our knowledge of this discussion.
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This abstract accompanies the essay: *Wie wird sich die Bevölkerung des Deutschen Reiches langfristig nach dem Erstem Weltkrieg entwickeln? Die ersten amtlichen Bevölkerungsvorausberechnungen in den 1920er Jahren* published in: *Populations, Projections and Politics. Critical and Historical Essays on Early Twentieth Centruy Population Forecasting.* Edited by Jochen Fleischhacker, Henk A. de Gans and Thomas Burch.
Published in 2003 by Rozenberg Publishers.

Also published in the Rozenberg Quarterly: Henk A de Gans – The Innovation of Population Forecasting Methodology in the Inter-War Period: The Case of The Netherlands.

Wie wird sich die Bevölkerung des Deutschen Reiches langfristig nach dem Erstem Weltkrieg entwickeln?

Die ersten amtlichen Bevölkerungsvorausberechnungen in den 1920er Jahren.

Problemstellung

Nach dem Ende des Ersten Weltkriegs rückten die demografischen Veränderungen in den Kriegs- und Nachkriegsjahren in das Zentrum der öffentlichen Debatten. Gegenstand statistischer Analysen bildeten die Geburtenausfälle in den Jahren 1914 bis 1919, die Übersterblichkeit der männlichen Bevölkerung und die Entstehung des Frauenüberschusses, die den Altersaufbau der Reichsbevölkerung nach dem Weltkrieg prägten. Hinzu kamen die Bevölkerungsverluste, die aus der territorialen Neugliederung des Deutschen Reichs in Folge der Umsetzung des Friedensvertrages von Versailles entstanden.1 Das Statistische Reichsamt stellte sich zur Aufgabe, die Verwerfungen in der Alters- und Geschlechtsstruktur als auch die bereits vor dem Weltkrieg eintretenden Veränderungen im Geburtenverhalten zu untersuchen und deren langfristige Auswirkungen auf die Bevölkerungsdynamik zu berechnen. Binnen vier Jahren erstellte das Statistische Reichsamt zwei demografische Vorausberechnungen über die künftige Bevölkerungsentwicklung und -struktur für das Territorium des Deutschen Reiches nach 19192 (Statistik des Deutschen Reichs, 316, 1926 und Statistik des Deutschen Reichs, 401, II, 1930). Die Grundlage für diese ersten zwei amtlichen Vorausberechnungen boten die Ergebnisse der Volkszählungen der Jahre 1910, 1919 und 1925.

Es wurden weitere statistische Erhebungen und Ergebnisse zur natürlichen

Bevölkerungsbewegung im Deutschen Reichsterritorium nach dem Erstem Weltkrieg hinzugenommen (Statistik des Deutschen Reichs, 276, 1922; Statistik des Deutschen Reiches, 316, 1926; Statistik des Deutschen Reiches, Sonderhefte zu Wirtschaft + Statistik, 5, 1929, Statistik des Deutschen Reichs, 360, 1930, Statistik des Deutschen Reiches, 401, I +II, 1930).

In der ersten 1926 erschienenen Vorausberechnung wurde die Entwicklung der Bevölkerungsdynamik und -struktur für einen Zeitraum von 50 Jahren (1925 bis 1975) und in der zweiten, 1930 erschienen, für einen Zeitraum von 75 Jahren (1930 bis 2000) und darüber hinaus erstellt.3 Nahe zeitgleich hier zu erarbeitete der Bevölkerungsstatistiker Friedrich Burgdörfer (1890-1967) eine weitere demografische Vorausberechnung.4
In diesem Beitrag werden folgende Inhalte diskutiert:

1 Die wesentlichen Veränderungen im Altersaufbau der Bevölkerung des Deutschen Reichs in Folge des Ersten Weltkrieges.
2 Die erste amtliche Vorausberechnung und die Berechnungsmodelle zur Beschreibung der strukturbedingten ehelichen Fruchtbarkeitsentwicklung und deren Auswirkungen auf den Bevölkerungsbestand und seine Struktur.
3 Die zweite amtliche Vorausberechnung und die Berechnungsmodelle zur Beschreibung des individuellen Fruchtbarkeitsverhaltens und dessen Auswirkungen auf wellenartige Geburtenausfälle.
4 Das Berechnungsmodell einer Bevölkerung mit einer stabilen Altersstruktur nach Alfred J. Lotka.
5 Bevölkerungspolitische Implikationen der amtlichen Vorausberechnungenein kurzer Exkurs

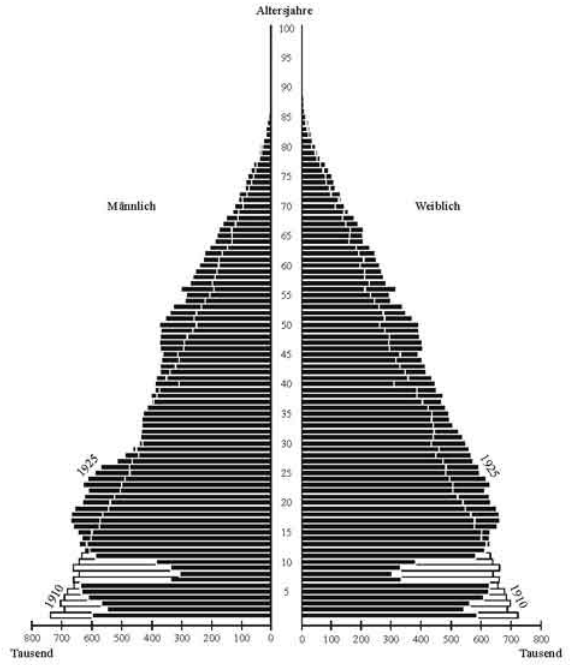
Die unmittelbaren Auswirkungen des Ersten Weltkrieges auf Bestand und Struktur der Bevölkerung

Die stetige Zunahme des Bevölkerungsbestandes kennzeichnete die demografische Entwicklung im Deutschen Reich für den Zeitraum von 1871 bis 1914. Mit dem Ersten Weltkrieg wurde diese gleichmässige Bevölkerungsentwicklung erstmals unterbrochen. Bis 1914 war nach Angaben der amtlichen Statistik die Einwohnerzahl des Deutschen Reichs auf 67,8 Millionen angewachsen. Bis zum Ende des Ersten Weltkrieges registrierte die amtliche Statistik eine Abnahme der Gesamtbevölkerung von mehr als 5,9 Millionen Menschen. Hieran schloss sich in den Nachkriegsjahren eine leichte Zunahme der

Gesamtbevölkerung im Verlauf der 1920er Jahre an.

Die Auswirkungen des Ersten Weltkrieges zeigen sich bei der Gegenüberstellung des Altersaufbaus der Bevölkerung für die Jahre 1910 und 1925. Der Altersaufbau von 1925 (siehe Grafik 9.1) zeigt deutliche Veränderungen gegenüber 1910. Die amtliche Statistik beschreibt die sich wandelnde Altersund Geschlechtsstruktur mit den Worten: “Mehr Erwachsene, aber weniger Kinder.” (Statistik des Deutschen Reichs, 401, II, 1930, 556).

Grafik 9.1 Altersaufbau der Bevölkerung im Deutschen Reich nach der Volkszählung 1925 und dem Gebietstand nach 1919

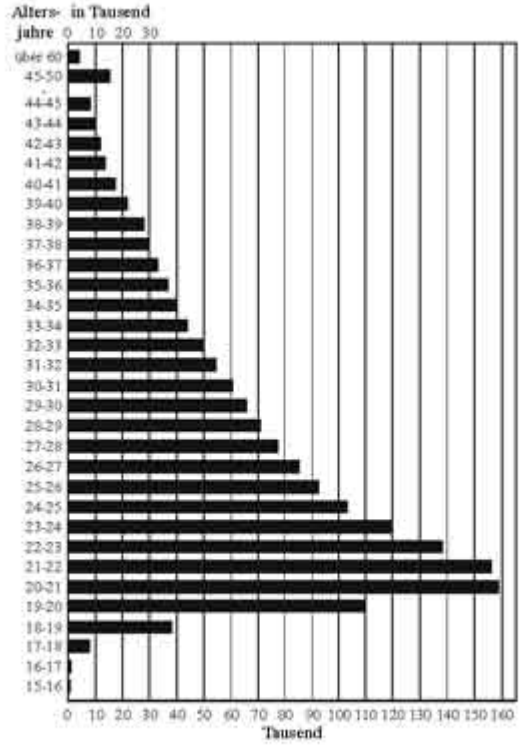


Source: Statistisches Reichsamt, 1930: Volkszählung. Die Bevölkerung des deutschen Reichs nach den Ergebnissen der Volkszählung 1925. Statistik des Deutschen Reichs, Band 401, II, Berlin: Reimar Hobbing, 556.

In konkreten Zahlen ausgedrückt ist 1925 im Vergleich zu 1910 der Anteil der unter 15jährigen um 17,9% zurück gegangen und der 15 bis unter 65jährigen um 20,9% sowie der über 65jährigen um 25,6% angestiegen.

Diese Verschiebungen in der Altersstruktur gegenüber von 1910 sind durch mehrere parallel verlaufende Prozesse in den Kriegsjahren verursacht worden. Die wichtigsten Komponenten sind die Geburtenausfälle und der Rückgang der Fruchtbarkeit in den Jahren 1914-1919. Sie führten zu starken Störungen in der zahlenmässigen Besetzung der unteren Altersgruppen. Der Geburtenausfall zwischen 1914-1919 wurde mit einem Geburtendefizit von ca. 3,3 Millionen beziffert. Auch in den ersten Nachkriegsjahren wurden deutlich weniger Kinder geboren als vor 1914. In Folge dieser Entwicklung nahm der Anteil der Kinder unter 15 Jahren an der Gesamtbevölkerung von Jahr zu Jahr ständig ab. 1912 betrug der Anteil der unter 15jährigen an der Gesamtbevölkerung noch 33,9% und sank durch die Fortsetzung des Geburtenrückgangs in den Nachkriegsjahren bis 1925 auf 25,8% ab (Statistisches Reichsamt, 1930, 558) (siehe Grafik 9.2). Zum anderem führte der Krieg zu Veränderungen der Sterblichkeitsverhältnisse, von denen insbesondere die über 20jährige männliche Bevölkerung betroffen war.5

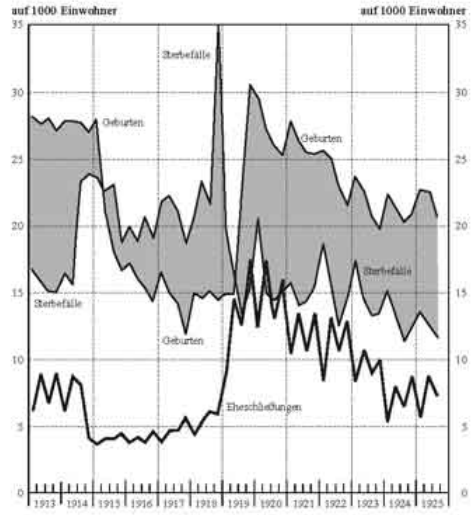
Grafik 9.2 Die im Weltkrieg gefallenen und gestorbenen deutschen Militärpersonen nach Altersjahren (in 1000)



Source: Statistisches Reichsamt, 1922: Bewegung der Bevölkerung in den Jahren 1914 bis 1919. Statistik des Deutschen Reichs, Band 276, Berlin: Reimar Hobbing, L.

Der in den Kriegsjahren registrierte schnelle Sterblichkeitsanstieg in den Altersgruppen der 20 bis unter 35jährigen Männer leitete grundlegende Veränderungen in dem Geschlechtsverhältnis der Deutschen Bevölkerung ein. Das proportionale Verhältnis zwischen der weiblichen und männlichen Bevölkerung in den Altersgruppen der 20 bis unter 35jährigen wurde empfindlich gestört (siehe Grafik 9.3). In diesen Altersgruppen entstand ein deutlicher Frauenüberschuss, den es bei den demografischen Vorausberechnungen zu berücksichtigen galt. Das betraf insbesondere die Berechnungen zur künftigen Geburten-, Fruchtbarkeits- und Eheschliessungsentwicklung.

Grafik 9.3 Eheschliessungen, Geburten und Sterbefälle im Deutschen Reich, 1. Vierteljahr 1913-3. Vierteljahr 1925, (auf 1000 Einwohner).



Source: Statistisches Reichsamt, 1926: Die Bewegung der Bevölkerung in den Jahren 1922 und 1923 und die Ursachen der Sterbefälle in den Jahren 1920 bis 1923. Statistik des Deutschen Reichs, Band 316, Berlin: Reimar Hobbing.

Die Statistiker registrierten in ihren Erhebungen starke Veränderungen in der Entwicklung der ehelichen Fruchtbarkeit in den Kriegsjahren. Um die Jahrhundertwende betrug die eheliche Fruchtbarkeitsziffer im Durchschnitt des Deutschen Reichs noch 279,7‰ und sank bis 1910/11 auf 224,5‰ ab. Zwischen 1913 und 1917 fiel die eheliche Fruchtbarkeitsziffer um nahezu die Hälfte ab und stieg geringfügig in den ersten Nachkriegsjahren. Allerdings hielt dieser Anstieg

nur bis 1924/26 an. Die allgemeine Fruchtbarkeitsziffer stieg auf 143,5‰ an, doch erreichte sie damit keineswegs das Niveau der Vorkriegsjahre (Statistisches Reichsamt, 1929: Beiträge, 14f.). Neben dem Rückgang der ehelichen Fruchtbarkeit wurde die Bevölkerungsdynamik und -struktur vor allem durch die veränderte Sterblichkeit beeinflusst. Besonders deutlich stieg die Sterblichkeit zu Beginn und zum Ende des Krieges und führte für die Kriegsjahre zu einem Sterbefallüberschuss.

Der entstandene Frauenüberschuss wirkte sich auf den Bestand der heiratsfähigen Frauen aus. Er zeigte sich besonders markant in den Altersgruppen der 25 bis unter 32jährigen Frauen, so dass ein nicht unbeträchtlicher Teil dieser Frauen ledig blieben und damit meist nicht an der Bildung von Familien beteiligt waren.6

Des weiteren stieg das durchschnittliche Erstheiratsalters an. 1913 betrug das durchschnittliche Erstheiratsalter für die männliche Bevölkerung ca. 27,5 Jahre, es stieg bis 1919 auf 29,0 Jahre an. Für die weibliche Bevölkerung erhöhte sich das durchschnittliche Erstheiratsalter im gleichen Zeitraum von 24,7 auf 26,0 Jahre (Statistisches Reichsamt, 1922, Bewegung, XIX.). Insgesamt wurde geschätzt, dass in den Kriegsjahren ca. 870.000 Eheschliessungen ausgefallen waren.

Nach dem Ersten Weltkrieg setzte sich der Geburten- und eheliche Fruchtbarkeitsrückgang weiter fort. Dieser gab den Anlass, sich mit den Auswirkungen der gegenwärtigen Geburten- und Fruchtbarkeitsverhältnisse auf die langfristige Gestaltung des Altersaufbaus und der Bevölkerungsdynamik zu beschäftigen.

Die erste amtliche Bevölkerungsvorausberechnung von 1926

Die durchgeführten Berechnungen und Analysen sind auf die Untersuchung der natürlichen Zuwachsraten gerichtet. Gewählt wird ein makroanalytischer Ansatz, in dem die Geburten und die eheliche Fruchtbarkeit in Abhängigkeit der Verschiebungen in der Altersstruktur ermittelt werden. Im vorliegenden Berechnungsmodell wird die Frage gestellt, wie sich der Geburtenüberschuss im Berechnungszeitraum bis 1975, bedingt durch Verschiebungen in der Altersstruktur, ändern wird. Für die Vorausberechnung wird die Komponentenmethode in Anwendung gebracht.7

Für die erste demografische Vorausberechnung wurden Annahmen für die künftige Entwicklung der Sterblichkeit und der räumlichen Mobilität formuliert.
Für die Entwicklung der Sterblichkeit im Berechnungszeitraum 1925 bis 1975 wurde die altersspezifische Sterblichkeit der Jahre 1921 bis 1923 zugrunde gelegt und angenommen, dass sie sich im Berechnungszeitraum nicht verändern werde. Angenommen wurde des weiteren eine geschlossene Bevölkerung. Als ausschlaggebender Einflussfaktor für die künftige Bevölkerungsentwicklung wird die eheliche Fruchtbarkeit in Betracht genommen.8 Für die Vorausberechnungen der Geburten- und ehelichen Fruchtbarkeitsentwicklung wurden Änderungsfaktoren für die eheliche Fruchtbarkeit und für die Eheschliessungen ermittelt.9 Ausgehend von der durchschnittlichen ehelichen Fruchtbarkeit der Jahre 1924/1925 wurden Mittelwerte der altersspezifischen Fruchtbarkeit für die jeweiligen gebärfähigen fünfjährigen Altersgruppen berechnet. Damit sollte das Mass der Beteiligung der jeweiligen fünfjährigen Altersgruppe an der jährlichen ehelichen Fruchtbarkeit in Kombination mit dem Bestand der gebärfähigen Altersgruppen ermittelt werden. Der Änderungsfaktor für die Entwicklung der Eheschliessungen wurde unter der Annahme ermittelt, dass sich das Verhältnis der verheirateten Frauen in allen Altersgruppen in gleichem Masse verändert wie der Gesamtbestand der weiblichen Bevölkerung. Diese Änderungsfaktoren werden für die Vorausberechnung anhand von drei hypothetischen Entwicklungsfällen zugrunde gelegt.

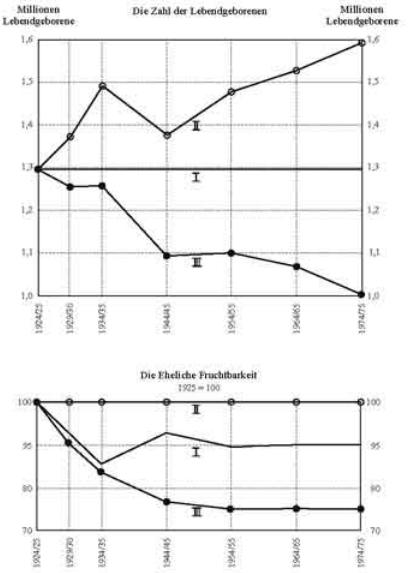
Entwicklungsfall eins: Die jährliche Zahl der ehelich Lebendgeborenen ist von 1925 bis 1975 konstant und gleich der Zahl der ehelich Lebendgeborenen im Jahr 1923.
Entwicklungsfall zwei: Die eheliche Fruchtbarkeit bleibt gleich der für den Durchschnitt der Jahre 1924 und 1925 berechneten Lebendgeborenenzahl unter Berücksichtigung der Lebendgeborenenzahl von 1923.
Entwicklungsfall drei: Die eheliche Fruchtbarkeit sinkt im Durchschnitt der Jahre 1924 und 1925 mit abnehmender Geschwindigkeit um insgesamt 25% bis 1955. In den Folgejahren bleibt die eheliche Fruchtbarkeit konstant.

Voraussichtliche Entwicklung der Geburten- und ehelichen Fruchtbarkeitsziffern 1925 bis 1975

Die Ergebnisse der durchgeführten Vorausberechnung für die drei Entwicklungsfälle zeigen, wie der Kurvenverlauf der Lebendgeborenenzahl und ehelichen Fruchtbarkeit (siehe Grafik 9.4) von der Altersstruktur der weiblichen

Bevölkerung im gebärfähigen Alter beeinflusst wird.

Grafik 9.4 Zahl der Lebendgeborenen und die eheliche Fruchtbarkeit gemäss den drei für die Berechnungen angenommenen Entwicklungsfällen Annahme: I Lebendgeborenzahl bis 1975 konstant; II Eheliche Fruchtbarkeit bis 1975 konstant; III Eheliche Fruchtbarkeit bis 1955 um 25% abnehmend, dann konstant



Source: Statistisches Reichsamt, 1926: Die Bewegung der Bevölkerung in den Jahren 1922 und 1923 und die Ursachen der Sterbefälle in den Jahren 1920 bis 1923. Statistik des Deutschen Reichs, Band 316, Berlin: Reimar Hobbing, 39.

Der Kurvenverlauf für den ersten Entwicklungsfall zeigt, dass für die gleichbleibende Lebendgeborenenzahl von 1924/25 sogar eine niedrigere eheliche Fruchtbarkeit als im Jahr 1925 ausreichend ist. Im ersten Jahrzehnt sinkt die eheliche Fruchtbarkeitsziffer um 14,4% gegenüber dem Ausgangswert von 1924/25. Im zweiten Jahrzehnt steigt die eheliche Fruchtbarkeitsziffer mit dem Aufrücken der geburtenschwachen Geburtsjahrgänge in die Altersgruppen mit der "höchsten Fruchtbarkeit" bis auf 92,8% des Ausgangswerts von 1924/25 an. Dann nähert sich der Kurvenverlauf einem Wert, der unter 10% der ehelichen Fruchtbarkeit des Jahres 1924/25 liegt.

Besonders deutlich zeigt sich der Einfluss der Struktur der weiblichen Bevölkerung auf den Kurvenverlauf im *zweiten Entwicklungsfall*. Die Konstanz der ehelichen Fruchtbarkeit ist im ersten Jahrzehnt noch gewährleistet. Im zweiten Jahrzehnt zeigen sich Veränderungen in der Lebendgeborenezahl, die durch den Eintritt der geburtenschwachen Jahrgänge von 1915/19 verursacht werden. In diesem Jahrzehnt sinkt die jährliche Zahl der Lebendgeborenen um ca. 100.000 ab.

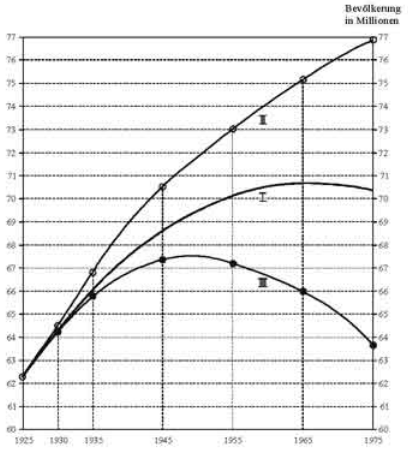
Im *dritten Entwicklungsfall* zeigt sich auffällig deutlich, wie stark die Entwicklung der ehelichen Fruchtbarkeit vom Bestand der gebärfähigen Frauen abhängt. Der

Kurvenverlauf der jährlichen Geborenenzahl zeigt ab dem zweiten Jahrzehnt eine scharfe Abnahme. Diese Abnahme wird sowohl durch den ehelichen Fruchtbarkeitsrückgang als auch durch das Aufrücken der zahlenmässig schwächer besetzten Geburtsjahrgänge 1915/19 in die Altersgruppen mit der "höchsten Fruchtbarkeit" verursacht. Die Abwärtsbewegung der Geborenenzahl hält auch nach 1955, trotz der angenommenen Konstanz der ehelichen Fruchtbarkeit in den nachfolgenden Jahren weiter an, "weil die Zahl der im gebährfähigen Alter stehenden Frauen ständig zurückgeht." (Statistik des Deutschen Reichs, 1926, Richtlinien, 39).

Voraussichtliche Entwicklung der Gesamtbevölkerung und der Bevölkerungsstruktur 1925 bis 1975

Wie sich im Berechnungszeitraum die Gesamtbevölkerung und die Bevölkerungsstruktur entwickeln wird, zeigen die nachfolgenden Kurvenverläufe (siehe Grafik 9.5).

Grafik 9.5 Die Entwicklung der Bevölkerungszahl von 1925 bis 1975 unter der Annahme: I gleichbleibender Lebendgeborenzahl bis 1975; II gleichbleibender ehelicher Fruchtbarkeit bis 1975; III um 25% abnehmender ehelicher Fruchtbarkeit bis 1955



Source: Statistisches Reichsamt, 1926: Die Bewegung der Bevölkerung in den Jah-ren 1922 und 1923 und die Ursachen der Sterbefälle in den Jahren 1920 bis 1923. Statistik des Deutschen Reichs, Band 316, Berlin: Reimar Hobbing, 42.

Im *ersten Entwicklungsfall*, der konstante Geburtenzahl für den gesamten Berechnungszeitraum unterstellt, wächst die Bevölkerung bis 1965 auf ca. 70,7 Millionen an, dargestellt im Verlauf der Kurve I. Im weiteren Verlauf verringert sich das Wachstum der Gesamtbevölkerung und entwickelt sich langfristig zu zu einer stationären Bevölkerung.10 In den anschliessenden Jahren nähert sich diese "Gesamtbevölkerung mit ständig geringer werdender Geschwindigkeit einer konstanten Zahl von 69,3 Millionen" an (Statistik des Deutschen Reichs, 1926, Richtlinien, 42). Unter diesen Umständen wird sich die Altersstruktur langfristig

verändern. Während die Zahl der unter 15jährigen im Untersuchungszeitraum nahezu unverändert bleibt, wächst die Zahl der 15 bis unter 65jährigen zwischen 1925 und 1975 um ca. 7% an. Noch bedeutsamer werden die Veränderungen bei den über 65jährigen sein, deren zahlenmässiger Bestand innerhalb der 50 Jahre um mehr als 200% wachsen wird. (Statistik des Deutschen Reichs, 1926, Richtlinien, 45).

Im *zweiten Entwicklungsfall*, konstante eheliche Fruchtbarkeit in allen Altersgruppen für den gesamten Berechnungszeitraum, steigt die Bevölkerungszahl ständig an. Die Bevölkerung nimmt im Verlauf von 50 Jahren um 14,6 Millionen zu. Sie wird bis zum Jahr 1975 auf 76,9 Millionen anwachsen. Auch nach 1975 wird die Bevölkerung, weiter anwachsen "wenn auch mit allmählich verzögerter Geschwindigkeit." (Statistik des Deutschen Reichs, 1926, Richtlinien, 42). Hinsichtlich des Altersaufbaus treten die Veränderungen sowohl bei der zahlenmässigen Besetzung der unter 15jährigen als auch der 15 bis unter 65jährigen Altersgruppen zwischen 1925 und 1975 auf. Gegenüber dem *ersten Entwicklungsfall* nimmt der zahlenmässige Bestand der 15 bis unter 65jährigen im gleichen Zeitraum um ca. 9,2% zu. Ebenso fällt der zahlenmässige Zuwachs der über 65jährigen besonders stark aus. Deren Zahl wird sich im Untersuchungszeitraum verdoppeln (Statistik des Deutschen Reichs, 1926, Richtlinien, 45).

Im Unterschied hierzu zeigt der *dritte Entwicklungsfall*, der sukzessive eheliche Fruchtbarkeitsrückgang um 25% im Laufe von 25 Jahren, ein sehr viel differenziertes Bild über die Entwicklung der Gesamtbevölkerung. Bis 1955 wird demnach die Bevölkerung um knapp 3,8 Millionen anwachsen und in den folgenden Jahrzehnten beständig wieder abnehmen. Erwartet wird, dass sich diese Entwicklung auch über das Jahr 1975 weiter fortsetzt und damit die demografischen Prozesse langfristig prägen wird. Diese Tatsache wird durch die ungleichmässige Verteilung der Altersgruppen im Altersaufbau belegt. Durch den nach dem Erstem Weltkrieg sich fortsetzenden Geburtenund ehelichen Fruchtbarkeitsrückgang wird die zahlenmässige Besetzung der unter 15jährigen sich deutlich verringern. Im *dritten Entwicklungsfall* wird der zahlenmässige Bestand der über 65jährigen noch rascher zunehmen (Statistik des Deutschen Reichs, 1926, Richtlinien, 45).

Beim Vergleich der Entwicklungsvarianten fällt auf, dass die Bevölkerung nach allen drei Entwicklungsfällen von 1925 bis 1945 wachsen wird.11 Dieses

Bevölkerungswachstum erklärt sich zu nicht geringen Teilen aus der Sterblichkeitsentwicklung, die in den Jahren 1924/26 besonders günstig war. Sie ist geprägt durch besonders niedrige altersspezifische Sterblichkeitsziffern bei Männern und Frauen.12 Sie führen zu einem leichten Anstieg der Lebenserwartung und der Zunahme der Gesamtbevölkerung. Die Rechnungen für den *zweiten* und *dritten Entwicklungsfall* belegen die schwache Besetzung der Geburtenjahrgänge nach 1935. Gleichzeitig rücken in den Folgejahren die geburtenstarken Vorkriegsjahrgänge in die höheren Altersgruppen auf.
Diese Erscheinung kennzeichnet ab 1965 die Entwicklung einer schwächeren Geburtendynamik und eine anwachsende Sterblichkeit. Vor allem die Berechnungen des dritten Entwicklungsfalls weisen auf die neuen demografischen Herausforderungen für die sozialen Sicherungssysteme hin: Einerseits der Geburtenrückgang und andererseits die Alterung der Bevölkerung.13
Langfristig zeigt sich eine "allmähliche Überalterung der Bevölkerung" und die hieraus erwachsenden "allgemeinen Versorgungslasten durch die Veränderungen des Zahlenverhältnisses der Nichterwerbstätigen (Kinder, Ehefrauen, Greise) zu den Erwerbstätigen." (Statistisches Reichsamt, 1926: Richtlinien, 47).

Voraussichtliche Tendenzen in der Entwicklung des Geburtenund Sterbefallüberschusses

Um die Ergebnisse der Bevölkerungsdynamik in Verbindung mit der Altersstruktur zu überprüfen, werden noch einmal die Geburten- und Sterbeziffern siehe Grafik 9.6) auf Grundlage der drei Entwicklungsfälle berechnet. Hieran ist die Frage geknüpft, wie sich langfristig die Geburten- und (oder) Sterbefallüberschüsse im Prozess der Bevölkerungsalterung entwickeln und die Bevölkerungsdynamik beeinflüssen werden.

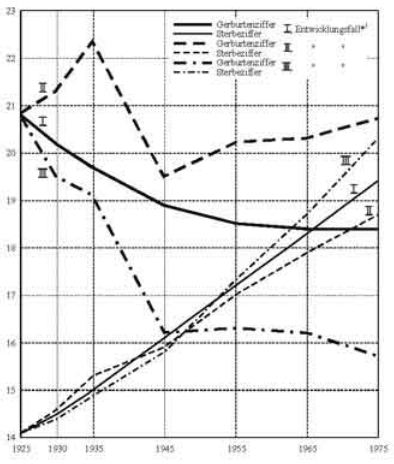
Beim *ersten Entwicklungsfall* sinkt die Geburtenziffer von 1925 bis 1965 und gleichzeitig steigt die Sterbeziffer, ausgelöst durch die Verschiebungen im Altersaufbau der Bevölkerung, an. Nach 1965 wandelt sich der Geburten- in einen Sterbefallüberschuss und in der Konsequenz gestaltet sich das Bevölkerungswachstum, trotz der jährlich gleichbleibenden Geburtenzahl, negativ.

Im *zweiten Entwicklungsfall* nimmt zunächst im ersten Jahrzehnt die Geburtenziffer zu und fällt bis 1945 stark ab. Von 1945 bis 1975 steigt die

Geburtenziffer mit leichten Schwankungen um ca. 6% und die Sterbeziffer um ca. 32,6% zwischen 1925 und 1975 an. Ungeachtet dieser unterschiedlichen Bewegung der Geburten- und Sterbeziffer wird die gesamte Untersuchungsperiode durch einen Geburtenüberschuss bestimmt. Obwohl letzterer zeitweilig zunimmt und nach 1945 sich wieder verringert, wächst nach diesem Entwicklungsfall die Bevölkerung ständig im gesamten Untersuchungszeitraum, allerdings mit nachlassender Intensität.

Beim *dritten Entwicklungsfall* kommt es bereits in den ersten zwei Jahrzehnten zwischen 1925 und 1945 zu "einem Absturz der Geburtenziffer". (Statistisches Reichsamt, 1926, Richtlinien, 50). Auf diesem Niveau verbleibt die Geburtenziffer weitere 20 Jahre, um dann erneut, aber mit nachlassender Intensität, zu sinken. Der starke Abfall der Geburtenziffern bewirkt bereits 1945 ein Zusammentreffen mit den ansteigenden Sterbeziffern, ausgelöst durch die Verschiebungen der Altersstruktur und die Überalterung der Bevölkerung. In allen drei Entwicklungsfällen zeigt der Kurvenverlauf der allgemeinen Sterblichkeit einen recht geradlinigen Anstieg infolge der zunehmenden Besetzung der höheren Altersgruppen.

Grafik 9.6 Die Entwicklung der Geburten- und Sterbeziffer (in 1000 der Bevölkerung)



Source: Statistisches Reichsamt, 1926: Die Bewegung der Bevölkerung in den Jahren 1922 und 1923 und die Ursachen der Sterbefälle in den Jahren 1920 bis 1923. Statistik des Deutschen Reichs, Band 316, Berlin: Reimar Hobbing, 50.

Die zweite amtliche Vorausberechnung von 1930

In der zweiten Vorausberechnung rücken die Veränderungen der ehelichen Fruchtbarkeit in den Nachkriegsjahren in den Vordergrund der Analysen und Berechnungen. Die Veränderungen zeigen sich in der rückläufigen Geburten- und Fruchtbarkeitsentwicklung, die nach Ansicht der amtlichen Statistik auf "den bewussten Willen zur Einschränkung der Kinderaufzucht" zurückzuführen ist

(Statistik des Deutschen Reichs, Bd. 401, II, Ausblick, 442). Dieser Umstand wird mit der Frage verknüpft, wie sich künftig das eheliche Fruchtbarkeitsverhalten entwickeln und welche Ausmasse es auf die Bevölkerungsdynamik haben wird. Zur Beurteilung der künftigen Bevölkerungsentwicklung wird ein Berechnungsmodell zur Begründung der ehelichen Fruchtbarkeit und der Reproduktionsintensität des weiblichen Bevölkerungsteils gewählt.
Untersucht werden einerseits die strukturellen Veränderungen der weiblichen Bevölkerung im fertilen Alter und andererseits deren verändertes Fortpflanzungsverhalten. Berücksichtigt werden hierbei die Veränderungen der Eheschliessungsquoten. Die amtliche Statistik wirft in diesem Zusammenhang die Frage auf, ob unter den Bedingungen der Bestandsveränderungen der fertilen weiblichen Bevölkerung und deren verändertem Fruchtbarkeitsverhalten wellenartige Geburtenausfälle entstehen werden.

Analysiert und berechnet werden die Verschiebungen in der Altersstruktur der Gesamtbevölkerung und hierbei vor allem die Verschiebungen im Ehebestand und im Bestand der fortpflanzungsfähigen weiblichen Bevölkerung. Für diese Vorausberechnung des Bevölkerungsbestandes wird wiederum die Komponentenmethode angewandt.

Für die Berechnung der Absterbeordnung wurde eine neue Sterbetafel für die Jahre 1924/26 ausgearbeitet und die altersspezifischen Sterblichkeitsziffern als konstant angenommem. Von vornherein werden die Aus- und Einwanderungsbewegungen aus den Berechnungen ausgeschaltet. Als massgebliche Einflusskomponente, die den Verlauf der künftigen Bevölkerungsentwicklung bestimmt, wird das veränderte individuelle eheliche Fruchtbarkeitsverhalten in Betracht gezogen.
Für die Vorausberechnungen der Geburten- und ehelichen Fruchtbarkeitsentwicklung werden zwei hypothetische Entwicklungsfälle formuliert.

Entwicklungsfall A: Die jährliche Geborenenzahl der Lebendgeborenen bleibt ständig gleich der Lebendgeborenenzahl des Jahres 1927.
Entwicklungsfall B: Die eheliche und uneheliche Fruchtbarkeit nimmt gegenüber dem Stand von 1927 um insgesamt 25% bis zum 1955 ab.

Der *Entwicklungsfall A* entspricht theoretisch der Ausbildung einer stationären Bevölkerung während der *Entwicklungsfall B* die nachlassende ehelichen

Geburtenhäufigkeit in den Jahren 1922 bis 1927 berücksichtigt, die an Hand von mehreren Berechnungsmethoden ermittelt wird.

Ermittelt wird eine Trendlinie der ehelichen Fruchtbarkeit für die Gesamtheit der fertilen weiblichen Bevölkerung im Zeitraum 1922 bis 1927. Um Struktureffekte wie die unterschiedliche Besetzung in den fertilen weiblichen Altersgruppen oder Schwankungen in der wirtschaftlichen Konjunkturentwicklung auszuschliessen, werden standardisierte Fruchtbarkeitsziffern gebildet (Statistisches Reichsamt, 1930, Bewegung, 26ff.). Hieran schliessen sich Berechnungen der ehelichen Fruchtbarkeitsziffern für das Jahr 1927 an. Die Berechnungsergebnisse werden an die Werte der Trendlinien angepasst und eine Messziffer für die Jahre 1927-1955 gebildet. Für die weiteren Jahre wird diese Berechnung in einem Intervall von 15 Jahren fortgesetzt. Die Berechnungen der amtlichen Statistik bestätigten die Annahme, dass das nachlassende individuelle Fruchtbarkeitsverhalten der fertilen weiblichen Bevölkerung
die wesentliche Ursache für die abnehmende Geburtenintensität bildet.14 Die Erhebungen der amtlichen Statistik zeigen, dass erste Veränderungen in der Geburtenentwicklung bereits in den Vorkriegsjahren eingetreten sind.

Diese bildeten eine wesentliche Quelle für die Diskussionen in den Nachkriegsjahren um die Ursachen, den Verlauf und die Konsequenzen der abnehmenden ehelichen Fruchtbarkeit für die Bevölkerungsentwicklung und -struktur.
Thematisiert wurden die ökonomischen und sozialen Veränderungen, die dem Rückgang der ehelichen Fruchtbarkeit voraus gingen, von Vertretern der Nationalökonomie, Statistik und Sozialhygiene. Zu ihnen zählen u.a. Ludwig Josef Brentano (1844-1931), Julius Wolf (1862-1937), Alfred Grotjahn (1869-1931), Paul Mombert (1876-1938) u.v.a.m.

Als weiterer Faktor, der den Verlauf der ehelichen Fruchtbarkeit beinflusst, wurde die Verheiratetenquote der Frauen im gebärfähigem Alter ermittelt.15

Um die Differenz zwischen den erwartungsmässigen und den tatsächlichen Eheschliessungen jedes Alters in den Jahren 1924 bis 1927 berechnen zu können, wurden zunächst standardisierte Altersheiratsziffern für die männliche Bevölkerung, bezogen auf die Heiratshäufigkeit der Jahre 1910/11, berechnet. Die Ermittlung der Heiratsziffer für ledige Männer war notwendig, um die Eheschliessungsmöglichkeiten der Frauen, deren zahlenmässiger Bestand einen

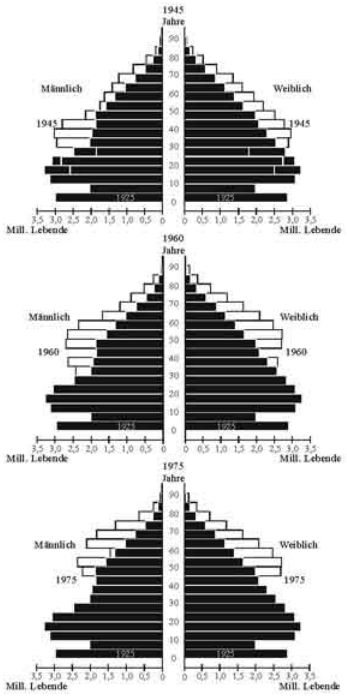
Überschuss aufweist, zum Ausdruck zu bringen.16 Von 1928 bis 1940 zeigen die Berechnungen eine Zunahme der Verheiratetenquoten der unter 45jährigen Frauen und der unter 48jährigen Männer. Infolge
der Verringerung der Sterblichkeit vor allem auf seiten der männlichen Bevölkerung rechnet die amtliche Statistik nach 1940 mit einem Männerüberschuss in den Altersgruppen mit der höchsten Heiratshäufigkeit. Um den Einfluss der Heiratshäufigkeit auf die eheliche Fruchtbarkeit und das Fruchtbarkeitsverhalten
berechnen zu können, wurde die Gesamtheit der verheirateten Frauen nach der Ehedauer zusammengestellt und in Beziehung mit der Ordnungszahl der Erst-, Zweit-, Dritt-, Viert- und weiterer Geburten gebracht. 17

Hierzu wurden standardisierte Fruchtbarkeitsziffern für die fünfjährigen Altersgruppen der gebärfähigen Frauen, gegliedert nach der Parität der Geburten für die Jahre 1922 bis 1927, berechnet. Die Berechnungen zeigten vor allem einen Rückgang der Erst- und Zweitgeburten. Hieraus leitete die amtliche Statistik ihre Annahme ab, dass der Geburten- und Fruchtbarkeitsrückgang vor allem auf das Verhalten der Familien, die Zahl der Kinder möglichst klein zu halten, zurückzuführen sei.

Zukünftige Veränderungen im Altersaufbau unter Berücksichtigung der Sterblichkeitsverhältnisse von 1924/26

Auf Basis der Sterbetafel von 1924/26 wurden altersspezifische Sterblichkeitsziffern berechnet und mit dem nach der Volkszählung von 1925 ermittelten Altersaufbau in Beziehung gesetzt. Wie sich der Altersaufbau im Zeitverlauf verändern wird, demonstriert die nachfolgende Grafik (siehe Grafik 9.7).

Grafik 9.7 *Veränderungen in der Besetzung der Altersklassen durch das Altern des gegenwärtigen Bevölkerungsbestandes*



Source: *Statistisches Reichsamt, 1930: Volkszählung. Die Bevölkerung des deutschen Reichs nach den Ergebnissen der Volkszählung 1925. Statistik des Deutschen Reichs, Band 401, II, Berlin: Reimar Hobbing, 657.*

Festgestellt wird eine verhältnismässig starke Besetzung der über 20jährigen im Jahre 1930. Sie sind auf die starken Geburtenjahrgänge von 1905 bis 1909 zurückzuführen. Diese verhältnismässig starke Besetzung wird sich unter Berücksichtigung gleichbleibender Sterblichkeitsverhältnisse in die höheren Altersgruppen verschieben. Mit dem Aufrücken dieser Geburtenjahrgänge in die alten und älteren Altersgruppen wächst deren Bestand zusehends an: “Bei den über 80jährigen schliesslich erstreckt sich die Zunahme voraussichtlich sogar bis 1990. Um diese Zeit werden rechnungsmässig etwa 4 bis 5mal so viel Personen dieses Alters vorhanden sein, wie bei der Volkszählung im Jahre 1925”. (Statistisches Reichsamt, Ausblick, 1930, 642).

Ein diametral entgegengesetztes Bild zeigt sich bei den geburtenschwachen Jahrgängen der Jahre 1914 bis 1919 und deren Vorrücken in die mittleren Altersgruppen. Sie führen zu einer deutlich geringen Besetzung der 25 bis unter 30jährigen im Jahr 1945 bzw. der 45 bis unter 50jährigen im Jahr 1960.

Diese Einschnitte in der Altersstruktur durch die schwach besetzten Geburtenjahrgänge zwischen 1915 und 1919 werden zwar z. T. durch die stärker besetzten Geburtenjahrgänge der ersten Nachkriegsjahre wieder ausgeglichen, ohne jedoch das Niveau der Vorkriegsjahre noch einmal zu erreichen.
Im Gegenteil führen sie wiederum zu neuerlichen Veränderungen in der

Besetzung der unteren Altersgruppen der 15 bis unter 20jährigen im Jahr 1945, der 30 bis unter 35jährigen im Jahr 1960 bzw. 45 bis unter 50jährigen im Jahr 1975. Geschlussfolgert wird, dass die im Ergebnis des Ersten Weltkrieges entstandenen Verschiebungen in der Alters- und Geschlechtsstruktur sich zukünftig wellenförmig fortsetzen und damit auch die künftige Entwicklung der Eheschliessungen und der ehelichen Fortpflanzung beeinflussen werden.

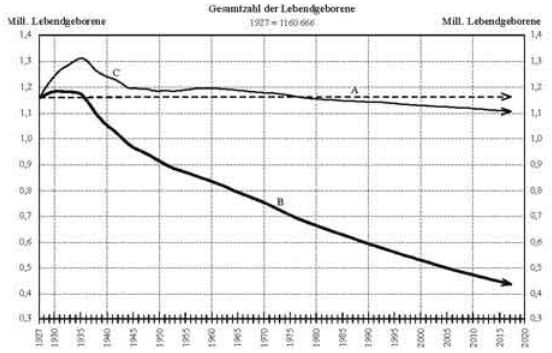
Die Verschiebungen in der Alters- und Geschlechtsstruktur zeigen sich beispielsweise bei der Entwicklung des Ehebestandes. So führt der Frauenüberschuss in den 25 bis unter 50jährigen Altersgruppen zu einer Zunahme der Eheschliessungen in den mittleren Altersgruppen. Es wird in diesem Zusammenhang auf die Zunahme des Anteils der "Spätehen" verwiesen, deren durchschnittliche Kinderzahl durch die verhältnismässig späte Eheschliessung "naturgemäss" kleiner ausfallen wird.

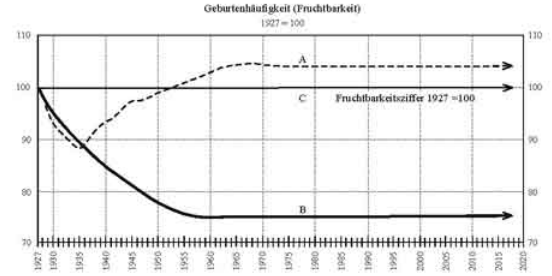
Mit dem Aufrücken der schwach besetzten Geburtenjahrgänge der Kriegsjahre in die Jahrgänge mit der höchsten Heiratshäufigkeit und dem Herausbilden eines Männerüberschusses bei den 20 bis unter 30jährigen Männern wird die Zahl der Frühehen wieder zunehmen. Dieser zeitweilige Anstieg des Ehebestandes, vor allem der "jungen Ehen", wird um das Jahr 1940 abgeschlossen sein. Mit dem Aufrücken der geburtenschwachen Nachkriegsjahrgänge in die Altersgruppen mit der höchsten Heiratshäufigkeit werden nach 1940 vor allem die weiblichen Altersgruppen im fertilen Alter nicht mehr voll besetzt sein. Diese rückläufige Besetzung kann nach Ansicht der amtlichen Statistik auch nicht durch eine höhere Geburtenhäufigkeit ausgeglichen werden.

Voraussichtliche Entwicklung der Geburtenziffern und der ehelichen sowie unehelichen Fruchtbarkeit 1930 bis 2000

Die Berechnungen zur Entwicklung der Geborenenzahl und der ehelichen Fruchtbarkeit sind anhand von drei Entwicklungsfällen durchgeführt worden. Neben dem *Entwicklungsfall A* (die jährliche Geborenenzahl der Lebendgeborenen bleibt ständig gleich der Lebendgeborenenzahl des Jahres 1927) und dem *Entwicklungsfall B* (die eheliche und uneheliche Fruchtbarkeit nimmt gegenüber dem Stand von 1927 um insgesamt 25% bis zum 1955 ab und bleibt danach unverändert), wird auch der *Entwicklungsfall C* (gleichbleibende Fruchtbarkeit wie 1924/25) in die Berechnungen aufgenommen (siehe Grafik 9.8).

Grafik 9.8 Zahl der Lebendgeborenen und Geburtenhäufigkeit
Annahmen: A Lebendgeborenenzahl ständig gleichbleibend wie 1927 = 1.160.000; B Eheliche und uneheliche Fruchtbarkeit bis 1975 um 25% abnehmend und dann gleichbleibend; C Eheliche und uneheliche Fruchtbarkeit ständig gleichbleibend wie 1927





Source: Statistisches Reichsamt, 1930: Volkszählung. Die Bevölkerung des deutschen Reichs nach den Ergebnissen der Volkszählung 1925. Statistik des Deutschen Reichs, Band 401, II, Berlin: Reimar Hobbing, 657.

Während die Zahl der Lebendgeborenen nach dem *Entwicklungsfall A* für den Zeitraum zwischen 1927 und 2000 sich nicht verändert, zeigen sich bei der Bewegung der Lebendgeborenen nach dem *Entwicklungsfall C* erste Abweichungen. Der zeitweilige Anstieg der Lebendgeborenenzahl nach 1927 ist z. T. auf das Nachholen von ausgefallenen Geburten in den Kriegs- und ersten Nachkriegsjahren zurückzuführen. Die geburtenschwachen Jahrgänge 1915 bis 1919 leiten ca. 20 Jahre später den Rückgang der Geborenen zahl zwischen 1935 bis 1945 ein. Diese Tendenzen setzen sich auch im Zeit verlauf weiter fort.18

Auffallend ist die Bewegung der Zahl der Lebendgeborenen nach dem Entwicklungsfall B, die zwischen 1927 und 1931 leicht ansteigt. Dieser Anstieg ist wiederum z. T. auf das Nachholen von ausgefallen Eheschliessungen und Geburten in den Kriegs- und Nachkriegsjahren zurückzuführen. Der Eintritt der geburtenschwachen Jahrgänge 1915 bis 1919 in die Altersgruppe der 20 bis 25jährigen führt unweigerlich zu einer Abnahme der Geborenzahl, der sich durch den Rückgang der ehelichen Fruchtbarkeit weiter verstärkt. Diese Tendenz der abnehmenden Geburtenzahl wird sich auch nach 1955 weiter fortsetzen.19

Ein anders Bild ergeben die Kurvenverläufe des *Entwicklungsfalls A* zur Bewegung der Geborenenzahl und des *Entwicklungsfalls B* zur Bewegung der

ehelichen Fruchtbarkeit zwischen 1927 und 2000. Nach dem *Entwicklungsfall A* sinkt bis 1935 die eheliche Fruchtbarkeit im gleichen Masse wie die Lebendgeborenenzahl bei konstanter ehelicher Fruchtbarkeit ansteigt.
Die Symmetrie zwischen den beiden Kurven wird aufgehoben, "wenn die nach 1927 geborenen Jahrgänge, die bei konstanter Geburtenzahl schwächer besetzt sind als bei konstanter ehelicher Fruchtbarkeit, in das fertile Alter eintreten". (Statistisches Reichsamt, 1930, Ausblick, 662). Etwa um das Jahr 1955 hat dann die eheliche Fruchtbarkeit wieder das Ausgangsniveau von 1927 erreicht. Ab 1965 wird bis zum Jahr 2000 das Ausgangsniveau der ehelichen Fruchtbarkeit von 1927 um ca. 4% überschritten. Diese Ergebnisse setzen allerdings den Anstieg der ehelichen Fruchtbarkeit über das Niveau des Jahres 1927 voraus.

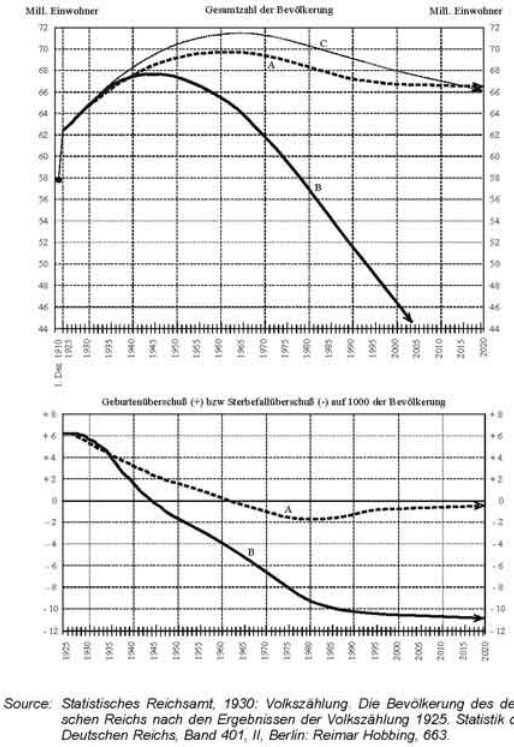
Notwendigerweise führt der *Entwicklungsfall B*, durch den in Rechnung gestellten Rückgang der ehelichen Fruchtbarkeit um 25% bis 1955, zu einem Rückgang der Geburtenhäufigkeit und zum anderem zu strukturellen Veränderungen durch den Eintritt der geburtenschwachen Kriegsjahrgänge in die Altersgruppe der 20 bis unter 30jährigen. Auch in den nachfolgenden Jahrzehnten setzt sich diese Entwicklung weiter fort, weil "die nunmehr in das gebärfähige Alter eintretenden Jahrgänge …. zahlenmässig immer schwächer werden" (Statistisches Reichsamt, 1930, Ausblick, 662).

Die Gegenüberstellung der Kurvenverläufe für die Zahl der Geborenen und der ehelichen Fruchtbarkeit zeigen, dass bereits 1927 das Niveau der ehelichen Fruchtbarkeit zu niedrig war, um die jährliche Zahl von 1.160.000 Geburten dauerhaft aufrecht zu erhalten. In der Konsequenz führt das zu niedrigere Niveau der ehelichen Fruchtbarkeit zu wellenartigen Geburtenausfällen.

Voraussichtliche Entwicklung der Gesamtbevölkerung und des Geburten- bzw. Sterbefallüberschusses 1927 bis 2000

Für die Berechnungen der voraussichtliche Entwicklung der Gesamtbevölkerung und des Geburten- bzw. Sterbefallüberschusses 1927 bis 2000 werden wiederum die drei Entwicklungsfälle, die auch bei den Berechnungen der Geburtenziffern und der ehelichen sowie unehelichen Fruchtbarkeit angewandt werden, zugrunde gelegt (siehe Grafik 9.9).20

Grafik 9.9 *Voraussichtliche Entwicklung der Bevölkerungszahl im Deutschen Reich Annahmen: A Bei gleichbleibender Lebendgeborenzahl; B Bei bis 1955 um 25% abnehmend und dann gleichbleibend Geburtenhäufigkeit; C Bei gleichbleibender Geburtenhäufigkeit*



Source: *Statistisches Reichsamt, 1930: Volkszählung. Die Bevölkerung des deutschen Reichs nach den Ergebnissen der Volkszählung 1925. Statistik des Deutschen Reichs, Band 401, II, Berlin: Reimar Hobbing, 663.*

Bereits der *Entwicklungsfall A* zeigt einschneidende Veränderungen des Geburtenüberschusses in der Gesamtbevölkerung bis zum Jahr 2000 und darüber hinaus. Die allmähliche Verringerung des Geburtenüberschusses beginnt bereits 1927 und setzt sich bis zum Beginn der 1960er Jahre fort. Verursacht wird diese Entwicklung durch die Veränderungen der Bevölkerungsstruktur, vor allem durch das Aufrücken der geburtenstarken Vorkriegsjahrgänge in die höheren Altersgruppen. Nach 1961/62 wird der Geburtendurch einen Sterbefallüberschuss abgelöst. Diese Tendenzen widerspiegeln sich in der Entwicklung der Gesamtbevölkerung. Zwischen 1927 und 1960 wird nach dem *Entwicklungsfall A* die Gesamtbevölkerung noch leicht um ca. 10% wachsen. Für die nachfolgenden Jahrzehnte zeichnet sich allerdings bereits ein Bevölkerungsrückgang mit nachlassender Intensität ab, der sich auch nach dem Übergang in das 21. Jahrhundert weiter fortsetzen wird.

Auch im *Entwicklungsfall B* wird sich von Beginn der Untersuchungsperiode an der Geburtenüberschuss verringern. Der Wechsel vom Geburten- zum Sterbeüberschuss wird sich allerdings im Vergleich zum *Entwicklungsfall A* sehr viel früher, um das Jahr 1945, vollziehen. Der schnelle Wechsel vom Geburten- zum Sterbefallüberschuss findet seine Entsprechung in der Entwicklung der Alters- und Geschlechtsstruktur. Der zeitweilige Anstieg der Gesamtbevölkerung

fällt mit der verhältnismässig starken Besetzung der Geburtsjahrgänge 1909/11 der weiblichen Bevölkerung und deren Eintritt in die fortpflanzungsstärksten Altersgruppen zusammen. Allerdings bestimmen sie die Entwicklung der Gesamtbevölkerung nur bis 1935. In den nachfolgenden Jahren wird es durch die abnehmende Besetzung der weiblichen Bevölkerung und des ehelichen Fruchtbarkeitsrückgangs zu einem permanenten Bevölkerungsrückgang kommen. Nach 1945 wird sich dieser Bevölkerungsrückgang weiter beschleunigen und selbst unter Berücksichtigung des *Entwicklungsfalls B*, eine gleichbleibende bzw. "unveränderte Geburtenhäufigkeit" nach 1955, kann diese Tendenz sich bis "ins Endlose fortsetzen." (Statistisches Reichsamt, 1930, Ausblick, 664).

Auf lange Sicht werden diese aufgezeigten Entwicklungstendenzen zu bedeutsamen Veränderungen der Alters- und Geschlechtsgliederung führen, wie die Darstellungen der Veränderungen im Altersaufbau der Bevölkerung des Deutschen Reichs von 1930 bis 2055 belegen (siehe Grafik 9.10).

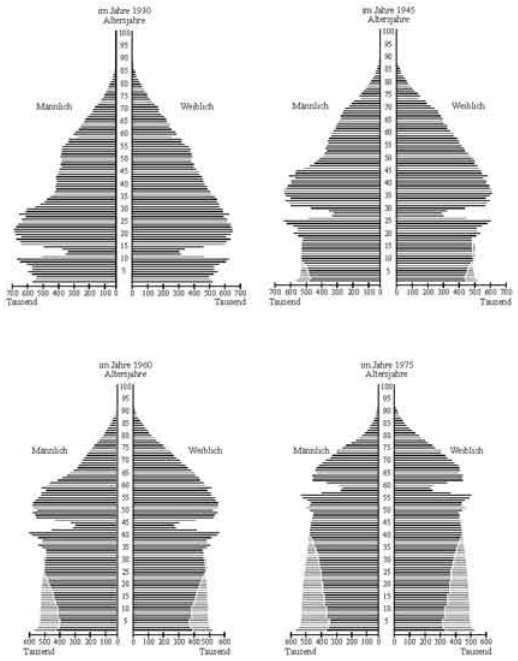
Nach dem *Entwicklungsfall A* werden die unteren Altersgruppen nicht mehr voll besetzt sein, weil die eheliche Fruchtbarkeit zur Aufrechterhaltung der jährlichen Zahl der Lebendgeborenen bereits zu niedrig ist. Die durch den Ersten Weltkrieg hervorgerufenen Störungen in der Altersstruktur rücken im Zeitverlauf in die höheren Altersgruppen. Im Ergebnis entsteht ein neuer Altersaufbau, der durch eine verhältnismässig gleiche Besetzung in allen Altersgruppen charakterisiert ist. Dieser Prozess, die Entstehung einer stationären Bevölkerung, wird nach den Berechnungen der amtlichen Statistik um das Jahr 2000 abgeschlossen sein.

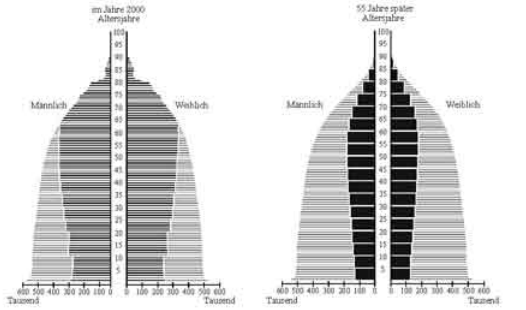
Nach dem *Entwicklungsfall B* wird sich im Untersuchungszeitraum die zahlenmässige Besetzung der unteren Altersgruppen permanent verringern. Durch die ununterbrochene Abnahme der Geburtenzahl ist jede Altersgruppe schwächer besetzt als die nächst höhere Altersgruppe. In Folge bildet sich ein neuer Altersaufbau, mit "einer nach unten hin sich verjüngenden Urne", deren Basis immer schmaler wird, heraus (Statistisches Reichsamt, 1930, Ausblick, 665).

Gemeinsam ist den verschiedenen Formen des Altersaufbaus nach den *Entwicklungsfällen A* und *B* eine Alterung der Gesamtbevölkerung. Sie führt in der Konsequenz zu einer stärkeren Besetzung in den höheren und hohen Altersgruppen. Vor allem die Berechnungen auf der Grundlage des *Entwicklungsfalls B* belegen eine besonders schnelle Zunahme in den

Altersgruppen der über 60jährigen, die sich im Vergleich zum *Entwicklungsfall A* wesentlich dynamischer gestaltet: “Der Anteil der 70 bis 80jährigen an der Gesamtbevölkerung steigt auf das 31/4fache an, während die Gruppe der Kinder und Jugendlichen bis Ende des Jahrhunderts auf 2/3 ihres jetzigen Bevölkerungsanteil zusammenschrumpft.” (Statistisches Reichsamt, 1930, Ausblick, 645).

Grafik 9.10 Die voraussichtlichen Veränderungen des Altersaufbaus der Bevölkerung. A (weiss) bei gleichbleibender Lebendgeborenenzahl; B (schwarz) bei bis 1955 um 25% abnehmender, dann gleichbleibender Geburtenhäufigkeit





Source: Statistisches Reichsamt, 1930: Volkszählung. Die Bevölkerung des deutschen Reichs nach den Ergebnissen der Volkszählung 1925. Statistik des Deutschen Reichs, Band 401, II, Berlin: Reimar Hobbing, 666f.

Die Bevölkerungsmodelle mit stabilen Altersstrukturen

Die zwei unterschiedlichen Formen des Altersaufbaus, die sich unter Berücksichtigung der zwei Entwicklungsfälle bis zum Jahr 2055 herausbilden werden, weisen auf ein wichtiges demografisches Phänomen, die Überalterung der Bevölkerung, hin. Ein Indikator, der die Bevölkerungsalterung widerspiegelt ist das mittlere Alter einer Bevölkerung. Die Veränderungen des mittleren Alters der Bevölkerung berechnet die amtliche Statistik auf Grundlage des *Entwicklungsfalls A* (gleichbleibende Lebendgeborenenzahl wie 1927) und *Entwicklungsfalls B* (bis 1955 um 25% abnehmende und danach gleichbleibende

Geburtenhäufigkeit). Im *Entwicklungsfall A* steigt das mittlerer Alter der Bevölkerung bis zum Jahr 2000 um 5 Jahre und im *Entwicklungsfall B* um 14 Jahre an. Die Verschiebungen im Altersaufbau und die Zunahme des mittleren Alters der Bevölkerung deuten bereits langfristige Veränderungen in der Entwicklung der Bevölkerungsdynamik an.

Um diese langfristigen Veränderungen der Bevölkerungsdynamik zu quantifizieren, werden für die weiteren Berechnungen die Modelle der stationären und stabilen Bevölkerung zugrunde gelegt. Gefragt wird erstens, wie hoch der tatsächliche Geburtenüberschuss unabhängig von dem Altersaufbau der Bevölkerung noch ist. Gefragt wird zweitens, wie sich die Bevölkerungsdynamik nach dem *Entwicklungsfall B* langfristig gestalten wird.21

Zu diesem Zweck werden weitere Berechnungen anhand des stationären und stabilen Bevölkerungsmodells, die in ihren Grundzügen vom österreichischen Populationstheoretiker Alfred J. Lotka (1880-1949) in den 1920er Jahren entwickelt worden war, durchgeführt.22 Bei der Vorgehensweise beruft sich die amtliche Statistik auf die Methodik von Lotka zur Berechnung der NRR und berechnet den Annäherungswert J. Für alle drei Enwicklungsvarianten wurden zunächst die Werte der allgemeinen Fruchtbarkeitsziffern für fünfjährigen Altersgruppen sowie für Mädchengeburten aus der Trendlinie
des Jahres 1927 berechnet. Als weitere Komponente wurde die Verheiratetequote je Frau jeden Alters vom Jahre 1975 als gleichbleidend für alle drei Entwicklungsfälle in die Berechnungen integriert. Unter der Maßgabe der gleichbleibenden alterspezifischen Sterblichkeit und der berechneten allgemeinen
Fruchtbarkeitsziffern für Mädchengeburten wurde mit Hilfe von Integralableitungen die Ziffer für den Wert J berechnet, der die Überlebenswahrscheinlichkeit des weiblichen Geschlechts einer Frauenkohorte nach der Sterbetafel 1924/26 zum Ausdruck bringt. Der Wert J wird hier als Ersatzwert für die NRR genommen und lässt sich als die Zahl von 100 000 Mädchengeburten, die das fertile Alter einer Frauenkohorte erreichen und durchleben in Kombination mit der Fruchtbarkeit der fünfjährigen Altersgruppen, interpretieren.23

Unter den Bedingungen der stabilen Bevölkerung bei gleichbleibender Geburtenhäufigkeit wie 1927 ergab der Wert J, dass die Überlebenden von 100 00 lebenden Mädchengeburten bei den zu Grundlage genommenen allgemeinen

Fruchtbarkeitsziffern 3,78% weniger Mädchen gebären werden als zur Erhalt des Bevölkerungsbestandes notwendig ist. Die durchschnittliche jährliche Zahl der Lebendgeborenen nimmt auf Grund der weiteren Veränderungen im Bestand der Frauen in den fertilen Altersgruppen von Jahrfünft zu Jahrfünft ab. Nach Überwindung der ungleichmässigen Besetzung der Altersgruppen durch den gegenwärtigen Altersaufbau wird die stabile Bevölkerung bei gleichbleibenden Geburtenhäufigkeit wie 1927 und konstanter altersspezifischer Sterblichkeit ein jährliches Geburtendefizit von -1,34‰ der mittleren Bevölkerung aufweisen.

Nach den Berechnung der ständig gleichbleibender Lebendgeborenenzahl wie 1927 *(Entwicklungsfall A)* entsteht eine sationäre Bevölkerung. Zur Bildung der stationären Bevölkerung kommt es, nach dem die skizzierten Unregelmässigkeiten im Altersaufbau langfristig überwunden werden. Der Wert J ist dann gleich 1. Dies wiederum setzt voraus, dass die Geburtenhäufigkeit der Mädchengeburten ständig gleich bleibt, d.h. die Überlebenden von je 100.000 geborenen Mädchen im gebärfähigen Alter immer wieder 100.000 Mädchen zur Welt bringen. Die Fruchtbarkeit von 1927 müsste daher um 3,93% grösser sein, um den Wert von J=1 zu erreichen. Den Berechnungen nach war bereits im Ausgangsjahr 1927 die Geburtenhäufigkeit zu niedrig, um die jährlich gleichbleibende Lebendgeborenenzahl wie im Jahre 1927 konstant zu halten.

Im *Entwicklungsfall B* wird angenommen, dass neben den ehelichen und unehelichen Fruchtbarkeitsziffern bei gleichen Verheiratetenquoten und die allgemeinen Fruchtbarkeitsziffern bis 1955 um 25% abnehmen und auf diesem niedrigeren Niveau in den Folgejahrzehnten sich nicht verändern. Die stabile Bevölkerung, die bei einer ab 1955 gleichbleibenden, um 25% niedrigeren Fruchtbarkeit und unveränderten Sterblichkeitsverhältnissen entstehen wird, zeigt eine Zunahme des Defizits an Mädchengeburten. Bei einem Geburtendefizit von -11,45‰ kommt es langfristig zu einer Bevölkerungsschrumpfung und -alterung. Unter diesen Bedingungen wird die Gesamtbevölkerung im Jahr 2055 auf 25,09 Millionen zurück gehen.

Die Geburten- und Sterbeziffern der stabilen Bevölkerung

Die Form der stabilen Altersstruktur, die sich nach Berechnungen der amtlichen Statistik bis 2055 herausgebildet hat, leitet über zu der Frage, wie sich unter diesen stabilen Verhältnissen die Geburten- und Sterbeziffern entwickeln werden. Die Dynamik des Alterungsprozesses der Bevölkerung, die zahlenmässige Zunahme in der Besetzung der höheren Altersgruppen, belegen die

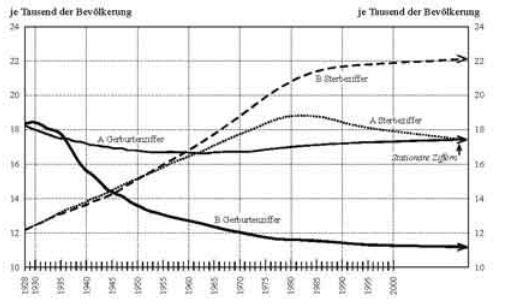
Kurvenverläufe der Sterbeziffern nach dem *Entwicklungsfälle A* und *B* (siehe Grafik 9.11).

Nach dem *Entwicklungsfall A* werden sich die Lebendgeborenen- und Gestorbenenzahl ständig die Waage halten. In diesem Fall wächst weder der Bevölkerungsbestand, noch verringert er sich, er bleibt vielmehr dauerhaft unverändert.

Nach dem *Entwicklungsfall einer stabilen Bevölkerung bei gleichbleibender Geburtenhäufigkeit wie 1927*, verringert sich der Geburtenüberschuss und mit Beginn der 1960er Jahre wird die weitere demografische Entwicklung durch einen Sterbefallüberschuss gekennzeichnet sein. Das Geburtendefizit beläuft sich auf ca. 1,3‰ und führt langfristig unter den Bedingungen einer stabilen Altersstruktur zu einem leichten Bevölkerungsrückgang.

Nach dem *Entwicklungsfall B*, die rückläufige Geburtenhäufigkeit um 25% bis 1955 und sich anschliessender Stabilität, setzt der Übergang vom Geburtenzum Sterbefallüberschuss bereits 1936 ein. Unter den Bedingungen einer sich herausbildenden stabilen Altersstruktur wird die weitere demografische Entwicklung durch ein Geburtendefizit von 11,4‰ bestimmt. Die Alterung der Bevölkerung wird unter den vorherrschenden Fruchtbarkeitsverhältnissen weiter voranschreiten.

Grafik 9.11 Entwicklung der Geburten- und Sterbeziffer (je 1000 der Bevölkerung). Annahme: A bei gleichbleibender Lebendgeborenenzahl; B bei um 25% abnehmender geburtenhäufigkeit



Source: Statistisches Reichsamt, 1930: Volkszählung. Die Bevölkerung des deutschen Reichs nach den Ergebnissen der Volkszählung 1925. Statistik des Deutschen Reichs, Band 401, II, Berlin: Reimar Hobbing, 672

Die endgültigen Geburten-, Sterbe- und Sterbefallüberschussziffern erschliessen sich aus der nachfolgenden Tabel

Tabel 9.12 – Die endgültigen Geburten-, Sterbe- und Sterbefallüberschussziffern

Bevölkerungstyp	Geburtenziffer	Sterbeziffer	Geburtendefizit
	auf 1000 Einwohner		
Stationäre Bevölkerung (*Entwicklungsfall A*)	17,4	17,4	--
Stabile Bevölkerung: bei konstanter Geburtenhäufigkeit wie 1927	16,6	17,9	- 1,2
Bei um 25% niedrigerer Geburtenhäufigkeit (*Entwicklungsfall B*)	11,5	22,9	- 11,4

Source: Statistisches Reichsamt, 1930, Ausblick, 672.

Bevölkerungspolitische Implikationen der amtlichen Vorausberechnungen- ein kurzer Exkurs

Neben dem Statistischen Reichsamt war es vor allem der Statistiker Friedrich Burgdörfer, der die Ergebnisse der demografischen Vorausschätzungen als eine außerordentliche ernste Warnung betrachtete. Diese Berechnungen hatten seines Erachtens den Nachweis erbracht, daß in der Zukunft sich das dynamische Volkswachstum nicht mehr fortsetzt und statt dessen die demografische Entwicklung massgeblich durch den dauerhaften Rückgang des Volksbestandes bestimmt wird (Burgdörfer, Lebensfrage, 1929).

Er wie auch andere Vertreter der Statistik und Nationalökonomie führten den Diskurs zu der Frage, wie den sich abzeichnenden demografischen Entwicklungstendenzen wirkungsvoll begegnet werden kann. Mit Sorge verfolgen sie die sich abzeichnende Differenzierung in der ehelichen Fruchtbarkeitsentwicklung zwischen der städtischen und ländlichen Bevölkerung

als auch die wachsenden Differenzierungsprozesse der ehelichen Fruchtbarkeit, die sich zwischen den verschiedenen sozialen Schichten und Berufsgruppen zeigten. All diese demografischen Faktoren verstärkten die Befürchtungen über nachhaltige Veränderungen des quantitativen wie auch qualitativen Bevölkerungsbestandes, der auf Basis der demografischen Vorausschätzungen und dem anhaltenden Rückgang der erwerbs- und reproduktionsfähigen Bevölkerung exemplifiziert wurde.

Die Befürchtungen vor einem dauerhaften Bevölkerungsrückgang beherrschen in den 1920er Jahren das demografische Denken nicht nur der Fachleute, sondern auch das der politischen Institutionen und Verbände. Sie entwerfen unzählige Konzepte, wie der anhaltende Geburten- und eheliche Fruchtbarkeitsrückgang aufgehalten werden könnte. Es wurde die abnehmende Bereitschaft der Frauen zur Geburt von mehreren Kindern beklagt. Statt der Geburt von vier und mehr Kindern, die für die Bewahrung des Bevölkerungsbestandes notwendig seien, würden die Frauen seit Beginn des 20. Jahrhunderts nur mehr ein oder zwei Kinder zur Welt bringen. Nach Auszählungen von Burgdörfer waren zwischen 1901 und 1925 die Erstgeburten um ca. ein Viertel, die der Zweitgeburten um ca. 38%, die Geburten von dritten Kindern um ca. 57% und die von vierten und fünften Kindern um 75% bzw. 80% zurückgegangen. In diesen Tendenzen sah er eine wachsende Gefahr für den strukturellen und den zahlenmässigen Bevölkerungsbestand.

Angesichts dieser quantitativen und qualitativen Veränderungen des Bevölkerungsbestandes propagierten Friedrich Burgdörfer und viele seiner Kollegen eine pronatalistische Familien- und Bevölkerungspolitik, die auch eugenische Zielsetzungen verfolgen sollte. Bereits während des Ersten Weltkrieges wurde die Erstellung einer Familien- und Fruchtbarkeitsstatistik angeregt, die Bestandteil der Bevölkerungsstatistik sein sollte. Ziel dieses statistischen Erfassungs- und Auswertungssystems war es die “biologischen” Vorgänge, d. h. die Fruchtbarkeitsvorgänge einer jeden Familie zu überwachen und das Tempo und die Intensität der ehelichen Fruchtbarkeit zu steuern (Beiträge, 1935, 6) Auf der Basis der familien- und fruchtbarkeitssatistischen Erhebungen regte Burgdörfer die Einführung der “Aufwuchsziffer” an. Diese sollte Auskunft darüber geben, wieviel der von 100.000 Frauen im Verlauf ihrer Fruchtbarkeitsperiode erbrachten Geburten das 15. Lebensjahr erreichen. Das 15. Lebensjahr markiert den Eintritt in das

Erwerbsleben als auch in die reproduktive Fruchtbarkeitsperiode der weiblichen Bevölkerung und trage deshalb eine demografische Bedeutung.

Eine genaue Erfassung und Kontrolle des Heiratsalters und der Ehedauer mittels der Familien- und Fruchtbarkeitsstatistik ermögliche den "Gebärertrag" der verheirateten Frauen als auch die tatsächlich erbrachte Geburtenzahl und die Geburtenfolge zu ermitteln. Die Rückkehr zu dem Geburtenniveau, das von der weiblichen Bevölkerung um die Wende vom 19. zum 20. Jahrhundert erbracht wurde, entsprach auch der politischen Idee von der Wiederherstellung der "Volkskraft", der "nationalen Erneuerung" und der "Rassetüchtigkeit".
Dieser politische Leitgedanke bestimmte die familien- und bevölkerungspolitischen Zielstellungen zur quantitativen und qualitativen Erneuerung des "Volkskörpers". Zur Wiederherstellung der demografischen Verhältnisse, wie sie vor dem Erstem Weltkrieg auf dem Territorium des Deutschen Reichs vorherrschten, wurde die Zusammenführung der quantitativen als auch qualitativen Familien- und Bevölkerungspolitik gefordert, die zwei Schwerpunkte verfolgte: Erstens sollte der Bevölkerungsbestand und das Bevölkerungswachstum gesichert und zweitens die Verschlechterung der Erbqualitäten aufgehalten und vor allem der Bevölkerungsbestand der gesunden und arbeitsfähigen Bevölkerungsgruppen erhöht werden (Denkschrift, 6). Im Artikel 119 der Weimarer Verfassung wurde die Verantwortung des Staats für die Gesundheit der Familie und des Nachwuchs verankert.

Die Einführung der familien- und fruchtbarkeitsstatistischen Erfassung war ursprünglich für die erste Volkszählung nach Ende des Ersten Weltkrieges vorgesehen. Hierzu kam es nicht, weil ebenso wie bei der nächst folgenden Volkszählung von 1925 die finanziellen Mittel für den Aufbau eines einheitlichen Systems der Familien- und Fruchbarkeitsstatistik fehlten. Erst Jahre später, unmittelbar nach der Konstituierung des nationalsozialistischen Staats wurden die erforderlichen finanziellen Ressourcen für den Aufbau der Familien- und Fruchtbarkeitsstatistik bereit gestellt und mit der Volkszählung vom 16 Juni 1933 auch erstmals für das gesamte Territorium des Deutschen Reichs praktiziert.

Um die in der Vorausberechnung berechneten und thematisierten Tendenzen, die zunehmende Bevölkerungsalterung und die rückläufige Geburtenund Fruchtbarkeitsentwicklung, gezielt beeinflussen und steuern zu können, wurden darüber hinaus auch die Gestaltungsmöglichkeiten in den Bereichen der Sozial-

und Familienpolitik erörtert. Bereits zum Ende der Weimarer Republik wurden konkrete Massnahmen wie beispielsweise der Ausgleich der Familienlasten und die steuerliche Entlastung der Kinderreichen diskutiert. Erörtert wurden verschiedene Modelle, die Kinderlosen und Ledigen steuerlich stärker zu belasten als die Familien mit Kindern. Darüber hinaus sollte die Erziehungsbeihilfe, vor allem für Familien mit zwei Kindern eingeführt werden. Durch diese finanziellen Leistungen sollten sie zur Geburt eines dritten Kindes motiviert werden (Zahn, 1921, Elster, 1924, Harmsen, 1931, Burgdörfer, 1934).
Die breite Diskussion von Vorschlägen zur materiellen und ideellen Unterstützung der Familien und zur Absicherung der sozialen Lebenslagen der älter werdenden Bevölkerung, die hierüber nach 1930 geführt wurden, ist wenig untersucht worden und bleibt daher noch für längere Zeit der Forschungen vorbehalten.

Anmerkungen

1 Der Gesamtumfang der abgetretenen Gebiete belief sich auf ca. 13% der Gesamtfläche des Deutschen Reichs vom 1. Januar 1910. Ergänzend fügte das Statistische Reichsamt hinzu: “Rund 2 Millionen deutscher Männer im produktivsten Alter sind unmittelbar dem Krieg zum Opfer gefallen, rund 3 Millionen Kinder sind infolge des Krieges (bis Ende 1919) ungeboren geblieben und das Deutsche Reich wurde verpflichtet, rund 7 Millionen Einwohner an andere Staaten abzutreten. ” (Statistisches Reichsamt, 1925, Die abgetretenen Gebiete, 1925, 6).
2 In der Literatur werden für die Methoden zur Berechnung der künftigen Bevölkerungsentwicklung und -struktur unterschiedliche Begriffe wie Vorausberechnung, Vorausschätzung und Prognose verwendet. (Feichtinger, 1979; de Gans, 1999; Romanuic, 1991, 1994). Der Begriff der Bevölkerungsprognose wurde in beiden ersten Vorausberechnungen vermieden, obgleich die Berechnungszeiträume zwischen 50 bis 100 Jahren umfassen. In der zweiten Vorausberechnung werden einleitend auch “bedingte Voraussagen” über die künftige Bevölkerungsentwicklung und -struktur formuliert. (Statistisches Reichsamt, 1930, Ausblick, 663). In meiner
Abhandlung werde ich den Arbeitsbegriff “Vorausberechnung” verwenden.
3 Die zweite Vorausberechnung wurde völlig neu gerechnet und das Berechnungsmodell der stabilen Bevölkerung in Anwendung gebracht.
4 Friedrich Burgdörfer zählte zu den führenden Statistikern des Statistischen Reichsamtes. Seit 1921 gehörte er zunächst als Regierungsrat und später als

Oberregierungsrat dem Statistischem Reichsamt an. Zu seinem Verantwortungsbereich zählte u.a. die Vorbereitung und Durchführung der Volkszählungen 1925, 1933 und 1939. Die wesentlichsten Ergebnisse seiner Vorausberechnungen veröffentlichte er 1932 in der Schrift “Volk ohne Jugend”. Mit ihr beförderte er die bevölkerungspolitischen Diskussionen in der Übergangsphase der auseinanderbrechenden Weimarer Republik und der sich konstituierenden NS-Herrschaft in Deutschland.
Ausführlich diskutiert Florence Vienne in ihrer Dissertation die Ergebnisse der Bevölkerungsvorausberechnung von Burgdörfer. (Vienne, 2000).
5. So stieg die in den Kriegsjahren die Sterblichkeit der 15 bis unter 20jährigen Männer um mehr als das dreifache, der 20 bis unter 25jährugen um mehr als fünfzehnfache, der 25 bis unter 30jährigen Männer um das zehnfache und das der 30 bis unter 35jährigen um mehr als das sechsfache.
6 In der Regel waren in den einzelnen Altersgruppen ca. 8 bis 10% weniger Frauen 1925 verheiratet als 1910.
7 Die Komponentenmethode wurde wenige Jahre zuvor in ihren Grundzügen von F.R. Sharpe & Alfred J. Lotka entwickelt. (Sharpe & Lotka, 1911).
8 In den Berechnungen für die Entwicklung der ehelichen Fruchtbarkeit wurden die konstanten Zahlen der unehelichen Fruchtbarkeit integriert. Es wurde angenommen, dass diese Zahlen mittel- und langfristig sich nicht verändern werden.
9 Die Änderungsfaktoren ” beziehen sich jeweils auf das Basisjahr und beschreiben somit die zeitliche Entwicklung der beiden Komponenten in Relation zum Basisjahr. Die Änderungsfaktoren beziehen sich jeweils auf ganze Altersgruppen und Zeitabschnitte.” (Bretz, 2000, 653)
10 “Eine stationäre Bevölkerung ist eine fiktive Bevölkerung, die sich aus einer etwa 100 Jahre lang konstanten Geborenenzahl bei gleichzeitig gleichbleibenden Sterblichkeitsverhältnisse ergeben würde”. (Statistisches Reichsamt, 1926, Richtlinien, 42).
11 Allerdings zeigen sich auch deutliche Abweichungen in der Intensität des Bevölkerungswachstums nach den drei Entwicklungsfällen.
12 “Die Besserung der Sterblichkeitsverhältnisse, ausgedrückt durch das allmähliche Ansteigen der mittleren Lebenserwartung” lassen sich zur Bildung des Deutschen Reiches 1871 zurück verfolgen. (Statistik des Deutschen Reichs, 1926, Richtlinien,44).
13 Zu erwarten war mit hoher Wahrscheinlichkeit, dass die “im jugendlichen Alter stehende(n) Bevölkerung” sich beträchtlich verringern wird, während die

Zahl “der im höheren und höchsten Alter stehenden Bevölkerung stark ansteigen wird.” (Statistisches Reichsamt, 1926, Richtlinien, 44).

14

14 Das belegen die Berechnungen der Trendlinien für dieEntwicklung der ehelichen Fruchtbarkeit in den Nachkriegsjahren:

" Mitte 1922	155,55 auf 1000 verh. Frauen im Alter von unter 45 Jahren				
Mitte 1923	149,77	=	=	=	=
Mitte 1924	144,40	=	=	=	=
Mitte 1925	139,40	=	=	=	=
Mitte 1926	134,74	=	=	=	=
Mitte 1927	130,38	=	=	=	="

(Statistisches Reichsamt, 1930, Ausblick, 642).
Darüber hinaus thematisierte die amtliche Statistik die Entwicklung der ehelichen Fruchtbarkeit in den einzelnen Gebietsteilen des Deutschen Reichs und zeigte auf, dass die bewusste Einschränkung der "Kinderaufzucht" in den Grossstädten besonders rasch voran schritt. "Es ist kein Grund anzunehmen, daß diese rückläufige Bewegung der Geburtenintensität mit dem Jahre 1927 zum Abschluß gekommen ist. Sie dürfte sich vielmehr noch über einen längeren Zeitraum hin fortsetzen. Dafür sprechen verschiedene Umstände. Der bewußte Wille zur Entscheidung der Kinderaufzucht wird voraussichtlich mit der Zeit auch in den jetzt noch geburtenreichen Volksteilen immer mehr zur Auswirkung kommen. Infolgedessen wird die Geburtenhäufigkeit besonders auf dem Lande und in den Klein- und Mittelstädten noch weiter abnehmen." (Statistisches Reichsamt, Ausblick, 1930, 642). Verstärkt wird dieser Prozess durch den sich verstärkende Zug der fortpflanzungsfähigen Ehen vom Land in die Stadt. Deren Fruchtbarkeitsverhalten passt sich dem in den Gross-, Klein- und Mittelstädten an, so dass im Ergebnis auch die Durchschnittsziffern der ehelichen Fruchtbarkeit sinken werden. Nach Berechnungen der amtlichen Statistik wurde der Anstieg der fortpflanzungsfähigen Ehen auf 40% in den Städten zu einem Rückgang der ehelichen Fruchtbarkeit um 10% in den Grossstädten, in den übrigen Gemeinden um 20% und im gesamten Reichsgebiet um ca. 22% führen.

15 Hierfür wurde die Familienstandsgliederung nach der Volkszählung vom 16. Juni 1925 und die Veränderungen der Heiratsverhältnisse in den Jahren 1925 bis 1927 zur Grundlage genommen. (Statistisches Reichsamt, Bewegung, 360, 6ff).
16 Damit wurden die Störungen im Bestand der männlichen Bevölkerung in den Altersgruppen mit der höchsten Heiratshäufigkeit ausgeschlosen.
17 Dieses Verfahren wählte die amtliche Statistik, weil sie weder über eine aktuelle Heiratstafel noch eine Familienstatitstik verfügte. Für die Berechnungen wurden Erhebungen von Preussen und des Freistaats Sachsen zur Entwicklung der Eheschliessungen und der geborenen Kinder in den Familien, gegliedert nach der

Ehedauer zugrunde gelegt. (Statistisches Reichsamt, Bewegung, 360, 22ff).
18 Allerdings ist “diese zyklische Wiederholung der ersten Geburtenwelle jedoch bei weitem nicht so stark ausgeprägt, wie gemeinhin erwartet werden dürfte” (Statistisches Reichsamt, 1930, Ausblick, 661).
19 Das bedeutet, dass die eheliche und uneheliche Fruchtbarkeit von 1955 ab, wie im zweiten Entwicklungsfall angenommen, unverändert bleibt, während die Lebendgeborenenzahl von Jahr zu Jahr beständig abnimmt.
20 Das Schwergewicht wird hierbei allerdings auf die Berechnung und Kommentierung der ersten zwei Entwicklungsfälle gelegt.
21 Der Entwicklungsfall B hat für die amtliche Statistik eine besondere Relevanz, weil “eine Abnahme der durchschnittlichen Geburtenhäufigkeit der gesamten Reichsbevölkerung um 25% des Standes von 1927 durchaus im Bereich des Möglichen liegt.” (Statistisches Reichsamt, 1930, Ausblick, 642).
22 In seinem Bevölkerungsmodell schliesst Lotka die Altersstruktur, die durch historische Zufälligkeiten entstanden war, aus.
23 Bei einem vollständigen Ersatz ist der rechnerische Ausdruck gleich 1. Bei nicht gesicherten Reproduktion ist der rechnerische Ausdruck kleiner als 1 und bei einer erweiterten Reproduktion ist der rechnerische Ausdruck grösser als 1.

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Read also from the same book: Henk A. de Gans – The Innovation of Population Forecasting Methodology in the Inter-War Period: The Case of The Netherlands.

The Innovation of Population Forecasting Methodology in the Inter-war Period: The Case of the Netherlands

4.1 Introduction

The foundations of the model of population dynamics that was to dominate population forecasting methodology throughout the greater part of the 20th century were laid by the English economist Edwin Cannan (1861-1935). By the end of the 1930s, it had become the new standard model for forecasting national populations. After the Second World War, the model became known as the Cohort-Component Projection Model (CCPM).**[i]**

However, this does not mean that the introduction and general acceptation of the new methodology was a matter of *veni, vidi, vici*. On the contrary, almost three decades passed between its emergence in 1895 and its reinvention and general application for national population forecasting purposes in the mid-1920s.

Dutch innovators of population forecasting methodology were among the front-runners in the reinvention of the CCPM approach in the inter-war period. This contribution focuses on the nature of their contribution from an international perspective. First, we discuss the contributions of two international pioneers of CCPM forecasting, Edwin Cannan (1895) and Harald Westergaard (1908). Next, the focus is on the almost simultaneous re-emergence of forecast of national

populations along CCPM lines. Was the general acceptance of the new approach to population forecasting a question of reinvention? If not, to what extent did the innovators of the 1920s build on the foundations laid by Cannan and Westergaard? This question is discussed in depth by focusing on the process of innovating population forecasting methodology in one particular country, viz. the Netherlands. The innovative nature of the respective contributions of the Dutch pioneers is assessed by means of, for example, a discussion of the forecasting culture in which they worked. Finally, the focus shifts to a discussion of how CCPM methodology was made suitable for urban forecasting and planning in the Netherlands in the course of the 1930s.

4.2 The pioneers of CCPM forecasting

Cannan was the first to introduce a cohort and age structure approach, relating past and future numbers of births to the (changing) age structure and the size of the fertile cohort groups in it. Cannan visualized his new approach with an appealing and much talked about age-period-cohort diagram (Cannan, 1895). The central element of CCPM is the cohort survival approach, which stems from the life-table, which already in 1895 was an elaborated instrument of demographic analysis.

At the time of its emergence, the dominant calculation model in the study of future population size was the geometric approach based on a constant rate of total population growth. Cannan's cohort approach is based on a comparative state analysis of successive population censuses (ten-year age groups by ten-year intervals) and the extrapolation of a time series of 'survival in England and Wales' proportions calculated by relating the observed number of persons in ten-year cohort groups in successive population censuses. These 'survival in England and Wales' proportions are not actually pure cohort survival rates but combined cohort survival and emigration surplus proportions of 10-year age groups in 10-year intervals. With respect to fertility, Cannan started from the assumption that the future number of births would remain constant in the years to come. The plausibility of this assumption was based on the expected future numbers of women in the fertile age period.

In terms of a good understanding of the future consequences of past and present population dynamics, Cannan's contribution was far-reaching: the plausibility of a future cessation of population growth rested on quantitative demographic-analytic argument. By means of the age (cohort) factor, Cannan was able to predict that a cessation of population growth and, eventually, even a decline was at hand; this

would not occur as a result of war, epidemic or starvation, as many post-Malthusians believed, but occur in a non-violent way, viz. through demographic evolution. Cannan's paper was part of a growing awareness and concern, and it appeared just before the flood of neo-Malthusian and eugenicist publications (including those by Galton and Pearson) on the subject of the consequences of the declining rates of population growth and of social-class-specific birth rates (Kreager, in this volume, chapter 5).**[ii]**

Twelve years later (i.e. in 1907), the Danish statistician and political economist Harald Westergaard astonished an audience of fellow members of the International Statistical Institute (ISI) when, during his opening address at the Copenhagen Session, he presented a practical application of CCPM-like theory in his 'horoscope of the population in the 20th century' (Westergaard, 1908). He demonstrated a masterly application of his knowledge of the effects of the interaction of population structure and change factors in population dynamics and a good understanding of the future direction of the pattern of fertility decrease.

Starting from the assumption of differences in pace of fertility decrease between European nations, Westergaard pictured in a purely qualitative way the consequences of demographic transition the countries of Europe were going to experience, in terms of both the ageing of the active population and the composition of the migration flows from Europe to the United States.
Westergaard's demographic future was presented as a speculation (as is clear from the use of the word 'horoscope'). His qualitative future can best be seen as a scenario of future demographic development. It is not surprising that he stressed its speculative character, considering he presented his paper to an international forum of pre-eminent statisticians and directors of national and municipal statistical offices. At the time, official statisticians in many countries held the opinion that statistical offices should stick to the facts, and not busy themselves with such speculative activities as forecasts (De Gans, 1999).
The prophetic quality of Westergaard's endeavour is striking. His scenario was based on an intelligent and creative analysis of vital statistical data for Denmark, sound analytic-demographic reasoning and a thorough knowledge of the theory of life-table populations, and he demonstrated a clear insight into the dynamics of population change, caused by the interaction of population structure and the components of population growth.

Westergaard started with an overview of mortality and fertility trends. From an analysis of Danish statistical data on the fertility of marriages with duration of 10-15 years, he concluded that the practice of birth limitation had already gained momentum and would continue at a rapid pace. According to Westergaard, contemporary statisticians agreed that the decrease in mortality rates was structural and could not be interpreted as a momentary perturbation finding expression in a typical life-table. The immediate result of mortality decrease had been a growth of population in all Western nations such as had not been dreamed of in former centuries. Mortality decrease had led to a population explosion in the Anglo-Saxon world in the second half of the 19th century and consequently to a considerable change in the 'balance sheet of nations', because of pace differences between countries.

The decrease in mortality was followed by a decrease in fertility that started at the end of the 19th century. A reduction in the birth rate was occurring everywhere. Marked differences were caused mainly by differences of temporality: some countries had retained high birth rates somewhat longer than other countries had, France being the only exception. In France, a remarkable decrease had started around the end of the 18th century and had resulted in almost stationary population growth by the end of the 19th century because the increase in life expectancy had not kept pace with the decrease in fertility.

At the end of the 19th century, net fertility had been highest in the upper classes of society in spite of a lower birth rate than in the working classes, because the upper classes had a lower infant mortality. But this was changing rapidly.

At the beginning of the 20th century, differences in infant mortality (e.g. in Denmark) no longer compensated for differences in fertility between the social classes. From his own analysis of Danish statistics, Westergaard had established that a fertility decrease was occurring in all social classes. He assumed that a similar development would take place in all European countries.

Westergaard predicted future shifts in the balance of nations from the differences observed in the pace of the transition of mortality and fertility rates: '*Just as the Anglo-Saxon race increased in numbers during the nineteenth century, so we may*

in the future observe a quick increase of the Russians and Poles until also this movement comes to an end‘ (Westergaard, 1908, p. 110). These shifts would cause significant new changes in the balance of nations, and particularly America would bear the consequences. In the past, America had been able to assimilate an influx of millions of mainly English-speaking immigrants who had proceeded to build a new English-speaking nation. Assimilation in the future would be more difficult if immigration were to alter its character, with the majority of newcomers coming from, for example, Russia or Italy.

Westergaard cautioned against the views of those who consoled themselves with the expectation that the end of the transition process would see a return to old times: ‘*… we shall not have the age distributions of former days, population will have an entirely different appearance, with its big numbers of old people and its relatively small numbers of young persons*‘ (Westergaard, 1908, 114).

The change of the age structure would have enormous effects. The burden of bringing up a child would be lessened, because more adults per child would be available to carry this burden. On the other hand, everywhere in the active population, ‘*… in offices and shops, the number of apprentices and juvenile clerks and assistants will be on the decrease, whereas grey-haired officials will be more abundant. And if it is true that all new ideas are born in young brains, then this difference of age distribution is identical with a serious loss for the future population*‘ (Westergaard, 1908, 113).

Westergaard’s ‘horoscope’ of the population provides, in a comprehensive and highly evocative way, the earliest picture of the demographic transition of Europe in the 20th century.**[iii]**

4.3 CCPM forecasting in the 1920s: continuity or reinvention?

The effect of Cannan’s and of Westergaard’s endeavours was not such that current forecasting practice was immediately replaced. On the contrary, forecasting along the traditional line of future extrapolations based on the arithmetical or geometrical growth of total population size continued to be the standard practice for quite a long time. It is interesting to note, for instance, that they are not mentioned in Walter F. Willcox’s overview of the best method of estimating the population of the United States, which was published in 1925. This is rather surprising, for Willcox must have had ample knowledge of contemporary population forecasting methodology: he had been chairman of a committee that had recommended the method of arithmetical progression for the United States

Census Bureau's population estimates in 1906, and in 1925 he chaired a committee that had been asked to review the issue of the best way of forecasting the population of the United States (Willcox, 1925, p. 27, f.n. 1). Willcox does not refer to the new methodological developments triggered by Edwin Cannan, or to the logistic growth approach that had been introduced in the United States by Raymond Pearl in 1920, methods that were heavely debated in the first part of the 1920s (De Gans, 2002).

Willcox distinguished three different methods. The first was based on the assumption of arithmetical growth of the total population, and the second on the assumption of geometrical population increase (also termed the natural growth of the population). The third was a component approach, based on the measure of the balance of births and deaths and of immigration and emigration. The use of the geometrical growth model, furnished to the United States by England, was declined.**[iv]**

In the words of Willcox: '*No theoretical defense of the method of geometrical increase is convincing. That method, like any other, must be defended and justified not on grounds of theory but because its results agree with the enumerations more closely than do the results of any alternative method*' (Willcox, 1925, p. 28).

Compared to what, for instance, the German town planner R. Baumeister had taught his students as early as 1876, there was no innovative element in the overview drawn up by Willcox and his committee (Baumeister, 1876; De Gans, 2002).

Either Willcox had no information on developments outside the USA or he saw the new approaches to population forecasting as being of no use to the United States. Whatever the reason, it is remarkable that the new forecasting method was not discussed by his committee, because population forecasting along CCPM-like lines had made a fresh start since the First World War. About twenty years after Cannan's forecast, CCPM-like forecasting was performed in many different countries almost simultaneously. In 1925 – the year of Willcox's overview – several forecasts had already been made and many more were to come: in Austria (Wilhelm Winkler, 1919), the Soviet Union (Strumilin, 1922), England (Bowley, 1924), the Netherlands (Oly, 1924; Wiebols, 1925; 't Hooft, 1926/1927), Sweden (Cramér, 1925), the USA (Lotka, 1925; Whelpton, 1928), Norway (Jahn, 1926), Sweden (Wicksel, 1926), Italy (Gini, 1926), Germany (Statistisches Reichsamt, 1926; 1928), Italy (Vinci, 1927) and France (Alfred Sauvy, 1928).**[v]**

It has not yet been fully researched to what extent the above-mentioned forecasts should be seen as independent reinventions or as elaborations inspired by Cannan, nor whether – and if so, to what extent – the population forecasters of the 1920s influenced each other in modelling population dynamics.

In Bowley's case, the source of inspiration is clear: there is a direct line from Cannan's forecast of 1895 to Bowley's of 1924. As a student at the London School of Economy and Political Science, Bowley had been inspired by the forecast made by Edwin Cannan, who was teaching there. Later, Cannan and Bowley had become colleagues at the same institution. In his own lectures, Bowley made frequent use of Cannan's diagram (Bowley, 1935). However, Bowley improved Cannan's model in one significant aspect: instead of working with synthetic rates of survival in England and Wales, derived from comparative numbers of persons present in ten-year age groups of successive population censuses, as Cannan did, Bowley introduced rates of survival of five-year age groups derived from the life-table.

At the other end of the spectrum there is the Austrian statistician Wilhelm Winkler (1884-1984), who in 1933 claimed to have been the first (in 1919) to make a forecast of the future population size and age structure based on the age structure at a specific point in time and on assumptions with respect to the elements of population change (births, deaths, migrants) in an attempt to clarify the future effects of the casualties of the Great War (Pinwinkler, 2003, 100).**[vi]**

The extent to which Winkler really worked along CCPM lines remains unclear: we have no description of the precise calculation model he employed, merely a general methodological description. This goes as follows. The quantitative losses caused by the Great War are fourfold:

(1) losses of ablebodied men caused by actions of war (wounding; illness);

(2) losses among the general population caused by an increased level of mortality during the war;

(3) loss of births during the war caused by the absence of men;

(4) loss of births after the war caused by the deaths of men in the fertile age groups.

Winkler had taken as an example the future number of births and the future development of the total population of France from 1910 and 1918 (by five-year age groups and five-year intervals of time on the assumption of constant numbers of births, deaths and migrants) (Winkler, 1919, 60-64).

The focus in the following sections is on the innovation of population forecasting along CCPM-like lines by forecasters in one specific country, the Netherlands. The issues examined are what they contributed, how innovative their contributions were from an international perspective, and whether they influenced or were inspired by others, and if so, who these others were.

4.4 Dutch contributions to the innovation of CCPM forecasting

In the Netherlands, component forecasting and cohort component forecasting gained a solid foothold soon after their first appearance after the First World War. Internationally a method debate was going on between the proponents of the demographic CCPM forecasting method (Bowley, Fisher) and the proponents of the logistic method (Pearl, Yule).**[vii]**

At the same time, a method debate was raging also in the Netherlands, but here it was between proponents of two different demographic approaches, the 'Wiebols method' and the "t Hooft method', which have in common the cohort survival element. The debate contributed greatly to the spread of knowledge of forecasting methodology among those who were interested in the future population size in general and the best way to calculate this in particular (De Gans, 1999).

The context of the Wiebols-'t Hooft controversy was a debate on the population issue in the Netherlands. The debate started in 1922 and continued throughout the 1920s and 1930s. Initially, the issue was the consequences of a continuation of the continuing high rate of population growth in the Netherlands since the First World War under grim economic conditions and prospects. Basically the population debate was between the advocates and the opponents of neo-Malthusianism, each side being represented by one of the leaders of the Dutch statistical establishment of that period: the pro-natalist H.W. Methorst (1868-1955) – who was the head of both the Central Statistical Bureau of the Netherlands (now Netherlands Statistics) and the Statistical Office of the International Statistical Institute (ISI) in the Hague – and the neo-Malthusian C.A. Verrijn Stuart (1865-1948), who had been Methorst's predecessor in both the offices mentioned.

Methorst argued that there was no urgent need for neo-Malthusianism because in due time the rate of population growth would slow down. His argument cwas founded on, among other things, a diagram in which the time series of the observed crude birth and death rates were graphically extrapolated.**[viii]**

Ultimately, so Methorst reasoned, the ongoing decrease in the birth rate which could be observed in the Netherlands too, would result in the ageing of the population and, therefore, in an increase in the death rate and, consequently, in the decrease in the growth rate of the population. Verrijn Stuart followed a different line of reasoning. In his view it was necessary to actively reduce fertility, because if the growth continued to be as high as it had been in the past years, future population growth would end in disaster. He illustrated his argument by using an extrapolation of the future of the population of the Netherlands based on a long-term geometrical progression calculation.**[ix]**
Because of the pro and anti neo-Malthusianism controversy, argument in the population debate was often based on emotion rather than on sound, objective reasoning. Many felt the need for a better understanding of population dynamics and of the demographic processes that were going on. This led A.O. Holwerda (1887-1944) – an actuary and one of the few representatives of the English school of mathematical statistics in the Netherlands at that time – to state that the statistician should be counselled on the relevant questions at stake. Methorst, so Holwerda said at the Annual Meeting of the Dutch Society of Political Science and Statistics in 1922 (during which the Dutch population issue was put on the agenda for the first time), had shown what was possible if statistical data were used in a correct and useful way. The population issue could not be discussed without an objective study based on adequate statistics, namely age and sex specific sets of what would be called now occurrence/exposure rates of mortality, legitimate and illegitimate fertility, nuptiality, and so on. First, these sets of transition rates had to be constructed. Next the development over time of each of these sets should be studied in order to gain a good understanding of the future course of population growth (VSS, 1922).

The debate at the Annual Meeting on the future size of the population of the Netherlands and its consequences led another actuary, Joh. C. Oly (1924), to bring his life-table expertise into play. In international historical overviews of population forecasting literature, Bowley’s 1924 forecast is often seen as the true beginning of modern forecasting. Oly’s forecast, which was published in the same

year, is not mentioned in international overviews, nor are any of the innovative Dutch achievements in population forecasting during the inter-war period. But, as we shall see below, Oly's approach can easily stand comparison with that of Bowley.

Both Bowley and Oly started from life-table population theory and from life-table probabilities of survival. This was an innovation in comparison with Cannan's forecast of 1895, as was the distinction between the male and the female population.

With respect to fertility, both Bowley and Oly used constant future numbers of births and constant survival rates. That, however, is where the similarity between the two approaches ends. Because of the fear of the consequences of overpopulation that was at the heart of the Dutch population debate, he also calculated another, minimum variant. This variant was as realistic as possible given the current state of the art. He used dynamic (i.e. decreasing) birth rates (a decrease from 26 to 18 pro mil in 40 years) (Oly, 1924). By making two calculations based on two different sets of assumptions with respect to fertility, Oly tried to gain an insight into the range of the future population size. In doing so, he was the first in the Netherlands to calculate alternative demographic futures.

The unsound reasoning of many participants in the neo-Malthusian population debate (neo-Malthusians vs. anti-Malthusians), as exposed in quite a few of the publications on the subject, induced a complete outsider to join the debate: F.W. 't Hooft (1896-1941), who was an engineer rather than a statistician or an economist. This man had all the strengths and weaknesses of the intelligent, self-educated person in the field, combining originality with a stubborn adherence to a convincing but inaccurate model of population dynamics (his 'conveyor belt' allegory). He developed the tunnel vision of an amateur and outsider debating with representatives from the field of experts and insiders with respect to the truth of his model of population dynamics in terms of his conveyor belt theory. This, however, led him and many others astray.**[x]**

The allegory goes as follows. The dynamics of population growth is a process similar to that occurring on a conveyor belt. Granules (births) are put on one end of the belt. Some of these granules disappear during their transport on the belt (deaths at a young age) and some fall off at the end of the belt (deaths at the end of the 'natural lifespan'). He then substituted this model of population growth for another one: a conveyor belt with a length equal to that of the average lifespan of the deceased. Now the granules put on one end of the belt will fall off simultaneously at the other end. The size of the population in the substitute model is equal to the product of the number of births and the average age at the time of death (not to be confused with the average life expectancy at birth, or with the average age of the population).

If the length of the conveyor belt is increased – that is to say, if the average lifespan of the deceased increases – then the belt can accommodate more granules at the same time. The population therefore increases, but merely as a result of the temporary lengthening of the average lifespan. In time, however, the balance will be restored, after which the population size will be again the result of the product of the new average lifespan of the deceased and the (constant) number of births ('t Hooft, 1926).

't Hooft firmly believed that population growth would come to an end in the near future because the birth rate would follow the death rate. In this respect he was in line with the ideas of Jacques Bertillon and other French demographers, though it is not clear whether he was familiar with their writings. In 1903, Bertillon had formulated his 'well-known law of the parallelism of the movements of population'.**[xi]**

This law says that, in general, the levels of both natality and mortality are high in the same countries, and both are low in the same countries. In other words, if mortality is high in a certain country, its natality is high as well; and vice versa, if mortality is weak ('*faible*'), natality is weak too (Bertillon, 1903, p. 1). Because 't Hooft focussed so much on the lengthening of the average lifespan of the deceased as the main contributor to population growth, he tended to neglect the

effect of fertility and that of the age structure of the female population. In fact, his theory held only under the condition of a strictly stationary population (in stable population theory).

As a consequence of his focus on the development of mortality, 't Hooft was the first to introduce (in 1927) the cohort approach into population forecasting based on generation life-tables; his approach was slightly more sophisticated than that of Cannan in 1895 ('t Hooft, 1927). Above all, he did not refrain from provoking the community of Dutch population experts into a debate about the method of population forecasting during the greater part of the interwar period. In this way he contributed to the dissemination of knowledge of and insight into the analytical demographic backgrounds of population dynamics and demographic forecasting. He also forced the participants to reflect upon the respective merits of his approach and that of Wiebols.
't Hooft's cohort approach was considered by many of his contemporaries to be of equal standing to that of Holwerda's PhD student G.A.H. Wiebols (1895-1960). However, in the end Wiebols' contribution to the development of population forecasting along CCPM lines in the Netherlands proved to be the most sustainable of the two: in the early 1930s, town planners working on the socioeconomic and demographic foundations of the 1935 General Extension Plan for Amsterdam demonstrated that the migration factor could easily be integrated into the Wiebols model.

Presumably, it was Holwerda who persuaded the economist Wiebols to write a PhD thesis on the subject of the future size of the population of the Netherlands, focussing in general on the methodological aspects of such a forecast, and in particular on the added value of working with *kanssystemen* ('probability systems', i.e. sets of age-sex-specific occurrence/exposure rates). Wiebols' endeavour resulted in a clear and, from a methodological point of view, highly transparent demographic forecast, starting from age-sex structure (females only), dynamic (increasing) age-sex probabilities of survival derived from lifetables, and a dynamic (decreasing) general fertility rate. Much to his dissatisfaction, Wiebols had to make do with the general fertility rate instead of agespecific fertility rates because of the lack of sufficient statistical data. Wiebols was the first person in the Netherlands to build on the views of the Berlin statistician R. Böckh and those of Böckh's former student Rahts regarding the population's level of replacement (later called 'net reproduction') in order to convince the statistical offices (and the

government of the Netherlands) of the need to work with age-specific fertility rates in population forecasting instead of general fertility rates, and thus incite them to collect the necessary statistical data regarding fertility (Wiebols, 1925, 38-42).**[xii]**

As was the case with almost all forecasts of European populations, Wiebols excluded international migration. He had good reasons to do so because of the societal setting of his calculations. Like Oly he was interested in the maximum size of the future population. Inter-war forecasters could not have foreseen that one day the Netherlands would have an immigration surplus. Neglecting international migration, therefore, meant neglecting an emigration surplus and therefore calculating a maximum future population. However, both in his book (Wiebols, 1925, 110-127) and in two letters to J.H. van Zanten, director of the Amsterdam Bureau of Statistics (Amsterdams Bureau van Statistiek) – who wanted to know what kind of statistical data his Bureau should collect in order to allow for the calculation of a population forecast for the municipality of Amsterdam – Wiebols presented a theoretical but highly sophisticated model of how to apply the new forecasting methodology at the municipal level, with the inclusion of migration and age-specific rates by marital state (De Gans, 1999, 25-28).

4.5 A culture of creative-practice-oriented, no-nonsense forecasting

It has not been possible to link, either directly or indirectly, the innovations in Dutch population forecasting methodology brought about by Oly, 't Hooft and Wiebols to the contributions of the international pioneers of CCPM forecasting methodology, viz. Cannan, Westergaard and Lotka. The main Dutch statisticians of the period – C.A. Verrijn Stuart and Methorst – were familiar with Westergaard's 'horoscope of the population of Europe'. Although Verrijn Stuart was clearly impressed by this 'extremely suggestive' picture of the future of Europe's population, initially he dismissed it because of its speculative nature (Verrijn Stuart, 1910, 286-287; De Gans, 1999, 79-80).

It is likely that the Dutch pioneers reinvented the new methodology independently of their international predecessors.13 Dutch actuaries like Oly and Holwerda were part of a long national tradition of life-table construction. Knowledge of life-table methodology was highly developed in the Netherlands. Moreover, if one looks at the methodological state of the art of population forecasting in the Netherlands prior to Oly and Wiebols, as represented in a few published

estimates and forecasts in the period immediately preceding the mid-1920s, one gets the impression of a culture wherein practical men were looking for practical solutions to everyday problems related to the future development of the population, the future number of households and the current and future housing need, and were using a lot of methodological ingenuity.

Some of these solutions resulted from problems faced by municipalities as a result of the 1901 Housing Act. This act can be seen as the formal beginning of urban and regional population forecasting and physical planning in the Netherlands. It established the close link between population forecasting, housing and town planning – that is, between the sciences of urban and regional planning and demography – that became characteristic of the Netherlands in the 1950s, 1960s and 1970s: under the Housing Act, municipalities with ten thousand inhabitants or more and municipalities which had seen a population growth of 20% or more in the past five years, were obliged to make urban extension plans.

The Housing Act became the legal basis of official housing policy. The municipalities were given the authority to improve housing conditions. They therefore needed a better insight into the kind and extent of housing demand and housing shortage and the development of housing need. This means that forecasts of future population, housing and extension plans were directly linked. This resulted in a growing interest among town planners in the development of good estimation methods. In the following decades, forecasting future population and future housing need became the core of preliminary town planning research – the precursor of modern urban planning.

Initially, the first decades of the 20th century saw a debate between proponents of different schools of town planning, namely the utilitarian school (mainly military and civil engineers) and the 'city beautiful' school (mainly architects). The former school had been responsible for town planning in the nineteenth century and was blamed for making the ugly town-extension plans that characterized the late 19th century urban housing districts. The debate had

wound up at the beginning of the First World War in favour of the architects. From the point of view of the development of urban population forecasting methodology, this was a pity because while the architects were interested primarily in design, some of the town planning engineers – especially J.H.E. Rückert – were also interested in preliminary town planning research as a necessary condition for good urban planning.
Preliminary town planning research started to flourish in the Netherlands with the emergence of town planning as an independent profession in the First World War era. The new discipline was taught at Delft Technological University. The first generation of modern, university-trained town planners was influenced by the examples in German manuals of town building and town planning, dating from the last decades of the 19th century, particularly that of Baumeister (1876) and that of Stübben (1890). In these manuals it was advised to make traffic surveys, population forecasts (based on geometrical population growth methodology), studies of housing need and the need for recreation areas and industrial parks before embarking on the actual business of town planning.

In the mid-1920s, British rather German influences started to manifest themselves in the Netherlands through Patrick Geddes' doctrine of 'survey before plan'. These new influences reinforced the effect of the earlier German influences. It was the Amsterdam conference of the International Garden Cities and Town Planning Association in 1924 that familiarised the Dutch with the doctrine, propagated by Abercrombie and Unwin, and helped the idea of regional planning to mature among policy makers (Faludi & Van der Valk, 1994).
The first to put the new principles of preliminary town planning research into practice was the military engineer Rückert, director of Tilburg's Public Works department (Rückert, 1917). He drew his inspiration primarily from German town planners. In the following decade, his preliminary town planning research report on the General Extension Plan for Tilburg – which contains a thorough and well founded demographic analysis and extrapolation of future population growth (though with traditional methodology) – became exemplary, although it had found little support in the 1920s.

4.6 A promise of new developments: Rückert's forecast for Tilburg (1917)
That demographic forecasting in general and CCPM forecasting in particular were to become the new standard approaches in population forecasting methodology in the Netherlands in the inter-war period, could not have been

predicted from pre-war history. But the harbinger of the new development was already present in a number of cases of well founded geometrical population growth forecasts made at the end of the First World War.
If Rückert had merely acted in line with Baumeister and Stübben – his German sources of inspiration – he would have started from the premise that a general extension plan had to provide for a population twice the size of the present one. By dividing this number by the figure of the average density per hectare of the existing built-up area of Tilburg, the required plan area could easily have been calculated. Instead, Rückert preferred to use a different approach.

First, he started from a different average population density figure, which was in conformity with the current norm. Next, in order to check his results, he calculated the population size that would result from dividing the total number of running metres of frontage in the extension plan by the average frontage (in metres) per habitant in the existing built-up area, and saw that the resulting population size was close to that obtained by the first method. Finally, he used the geometrical population growth rate approach to calculate how long it would take for the size of Tilburg to double and for the planned town extension capacity to be attained.

The average annual growth rate of the future population was determined by analysing the observed population growth rates of the periods 1879-1909, 1899-1909 and 1909-1914. He checked the plausibility of the assumed future average annual growth rate of Tilburg by analysing the observed annual birth and death rates, the natural growth rates, the crude nuptiality rates and the absolute natural and total population growth of Tilburg in the last 'normal' (pre-war) period, viz. 1890-1914. From this analysis of the observed time series, he concluded that natural growth rather than an immigration surplus had brought about the population increase Tilburg had seen in the period under consideration. Basing himself on various factors (e.g. the construction of a new shipping canal and the alleviation of the housing shortage), he expected an improvement in the economic conditions of Tilburg and hence an increase in immigration. Because of their young average age, he expected the

future migrants to have a positive effect on the birth rate and concluded that his figures should to be taken as a minimum forecast.
In his use of orthodox geometrical population growth theory, Rückert's actual population forecast is traditional. But it was demographic in the way he made assumptions. Like Baumeister (1876), Rückert did not believe in a law of geometrical population growth, although he had no choice but to use the geometrical growth method. He was convinced that the deduction of future developments from past ones does not provide a solid standard; the rates in the future may be very different from the ones calculated.
The novelty lies in the prudence of its application: time and again Rückert looked for feasible arguments and ways to check his calculations. He was inventive, and although not an innovator of forecasting methodology itself, he was exemplary in his search for a solid foundation for his assumptions within a wider socio-economic context.

4.7 Structural housing shortage? Rooy and the calculation of the future housing need (1920; 1921)
Another example of the promise of the new development in population forecasting is the forecasts of the national population made by Rooy in 1920, and again in 1921 (Rooy, 1920; 1921). His calculations are of particular interest because they concerned a key issue in post-First World War Dutch society: the housing shortage.
The housing shortage was seen as a serious problem, and it incited public concern. While the policy of the Minister of Labour, who was responsible for housing, was founded on the conviction that the housing shortage problem would soon be solved, critics, like Rooy, thought otherwise: they were of the opinion that the existing housing shortage had a structural dimension. Rooy provided them with quantitative arguments based on the analysis and forecast of the determining factors of the housing shortage. He warned against the dangers of underestimating future housing demand and blamed the government for not taking sufficient account of such factors as the negative effect of the eight-hour working day on housing production, and the effects of the increase in population and of the decrease in average household size on future housing demand.

The procedure Rooy employed was the following. First, he estimated the housing shortage in 1921. He did this by comparing the actual number of dwellings in 1920 and the calculated number on the basis of a linear extrapolation (from 1909

to 1920) of the decrease in the average dwelling occupation figure observed between the census of 1899 and that of 1909, with the population size in 1920. Next he had to take into account the backlog in the necessary replacement of obsolete houses since 1914 (the year the Great War began) and the necessary stock of uninhabited houses (estimated at 3% of the total housing stock). He found that seven years' of housing production had been lost as a result of the First World War (in which the Netherlands did not participate).
Once the housing shortage in the baseline year for his population forecast had been assessed, Rooy proceeded to forecast the increase in the housing demand resulting from future population growth.
The first thing he had to do was estimate the growth of the population in the coming decades. He assumed that a future decrease in the birth rate would be more than compensated for by a future decrease in the death rate. This would result, he expected, in a continuation of population growth in the following two decades at the level of the ten-year growth rate observed in the past decade. Having an estimate of the size of the population in the baseline year 1920 (from the census) and having assessed the ten-year growth rate of the population in the decades to come, he could calculate the future size of the population.

Next, he had to make assumptions about the proportion of persons not living in houses (which he kept constant at 3.3% of the total population), the decrease in the average dwelling occupation figure (which he assumed to decrease at 0.07% per decade) and the stock of uninhabited houses (which he set at 3% of the total housing stock). Moreover, obsolete houses had to be replaced, as had dwellings lost as a result of city formation.
Taking all these factors into account, he assessed the actual future housing demand. He came to the conclusion that on average about 55,000 houses would have to be built each year. With the means available at the time, a maximum of approximately 25,000 houses per year could be built. Rooy therefore came to the disconcerting conclusion that the required annual production would fall short by 30,000 houses and, therefore, that the housing shortage should be seen as a structural problem.**[xiv]**

Rooy calculated the future housing need in a simple, straightforward and pragmatic way. Basically, he merely used extrapolations of the average dwelling occupation figure and used the geometrical population growth method (with a growth rate of 16.6% per decade) to forecast future population size. The

plausibility of this is sustained by demographic reasoning, deduced from observed and expected tendencies in the birth and death rates maintaining their balance.
The method is simple but efficient and satisfactory, given the task Rooy had set himself. The method is also a good example of a no-nonsense approach in applied ('everyday') population forecasting.**[xv]**

4.8 Rikkert and the 'Halle method' (1919) – or the shortcomings of extrapolating average dwelling occupation figures

Rooy did not refer to the fact that, a year earlier, an Amsterdam housing expert had severely criticised the use of extrapolated average dwelling occupation figures for forecasting purposes. The expert – Rikkert – based his criticism on the 'Halle method', which is the third example of intelligent applied forecasting to be discussed here.
The method was originally developed in the German town of Halle-am-Saale. It was applied for the first time in December 1905 and the results appeared in a publication by the Statistical Office of Halle, *Die Leerwohnun-gen in Halle a.S., 1905-1911* (Heft 17, 1912. Halle: Gebauer-Schwetsche). It was introduced in Amsterdam in 1914 by the civil engineer J.C.W. Tellegen, who was director of the Department of Building and Housing Supervision. From the moment of its introduction, the Halle method was successfully applied in Amsterdam in the inter-war years and also became popular in other municipalities.
The merits and demerits of the method were amply discussed by housing experts in the inter-war years and again in the 1970s (De Gans, 1999, 162-168).
The method was developed for the accurate estimation of the annual changes in the number of households (families) in a municipality. Once the number of households was known, the number of households in need of a dwelling could be estimated and, by making a comparison with the municipal housing stock, so could the size of the current housing shortage.
By modern standards the Halle method was quite advanced: the process of family formation and dissolution was essentially modelled in terms of marital state transitions. The application of the method depends to a high degree on reliable, up-to-date statistics on marital state transitions. It is therefore interesting to see how the method was summarized by J.H. van Zanten, director of the Amsterdam Bureau of Statistics and a fervent advocate of the method.

According to Van Zanten, the statistical office in Halle investigated the conditions leading to the formation of new families (who would then need a new dwelling) and the disappearance of families (which would provide uninhabited dwellings). Generally speaking, immigration leads to the former and emigration and death to the latter, although not every wedding results in an increase in housing need, nor does death inevitably result in the vacating of a dwelling. The Bureau concluded that housing need increases with the marriage of unmarried people, the marriage between a divorced man and an unmarried woman, and the immigration of a family. Housing need decreases with the marriage of a widower and a widow, the marriage of a widower and a divorced woman, the death of a widower, widow or divorced woman, and the emigration of a family. Because the method was not one hundred percent accurate, checks and verifications against census data were necessary from time to time. Several factors lead to inaccuracies: not all marriages of unmarried persons increase the housing need, not all persons marrying a person from outside the municipality compete on the municipal housing market, and not all widowers/widows continue to occupy a dwelling after the death of their spouse. Moreover, cohabitation outside wedlock (concubinage, brothers and sisters, and unrelated persons living together) is a totally uncertain factor (Van Zanten, 1938, 356-358).

The Halle method allowed for an analysis of the process of family/household formation and dissolution on an annual basis and provided an insight into the true development of housing need. The method could also be applied retrospectively by calculating the development of the number of families/households needing a dwelling over the past period. With the Halle method, Rikkert – the housing statistician at Amsterdam's Department of Housing – was able to demonstrate that the housing shortage in Amsterdam had increased considerably in the period 1909-1918. This conclusion differed considerably from what could be assumed from the course of development of the average dwelling occupation figure over the same period.

The shortfall was an important discovery. Rikkert made it clear that the average dwelling occupation figure depended on changes in the demographic factors of

family formation and dissolution on the one hand, and changes in the housing stock on the other. Therefore the extrapolation of observed time series of the average dwelling occupation figure for forecasting purposes was based on unsound reasoning. Rikkert was the first to warn against the use of the average dwelling occupation figure as an independent instrument for the prediction of the future housing need (Rikkert, 1919; Van Fulpen, 1985).

The above examples provide an insight into the general forecasting culture, as it existed in the Netherlands at the time of the reinvention of CCPM methodology. It was a culture wherein men, who were interested in the issues at stake, applied a careful, creative and no-nonsense way of reasoning in order to develop methods for finding solutions to practical issues.

Because of the lack of references it is difficult to assess whether Rooy knew of the studies by Rückert and Rikkert. Rooy published his articles on calculating housing shortage and housing need in the monthly journal *Economisch-Statistische Berichten*, an authoritative journal in economics and statistics. Despite this, and rather surprisingly, there are no references to his population forecasts in the contributions of those who participated in the national debate about the population issue (Verrijn Stuart, Methorst, Oly, Wiebols, 't Hooft). It is hardly possible that these men were not familiar with Rooy's publications.

The only plausible explanation is that Rooy was tackling a different issue and that it was thought that Rooy's issue had nothing to do with the population issue they were discussing.

4.9 CCPM methodology made suitable for urban forecasting and planning

Wiebols applied for a job in the field of town planning, but in vein. It was not to be Wiebols who would apply the elaboration of his population forecasting schemes for urban forecasting purposes. Nor was it to be another economist, or a statistician or demographer. It was the members of a different profession who made CCPM forecasting suitable for all geographical levels (national, regional, urban) by integrating migration into the calculation schemes of the forecasting model.

In the elaborated and well founded 1932 population forecast for Amsterdam, which was made for the 1935 General Extension Plan for Amsterdam, the town planners and forecasters Van Lohuizen and Delfgaauw demonstrated that Wiebols' approach could easily be applied to migration (Grondslagen, 1932). Also, they were the first to calculate age-specific headship rates (calculated from census data) and to apply these rates to the forecast age structure of the

population, using the Halle method to check and correct these rates. This allowed a better insight to be gained into future housing than did working with average family size rates or average dwelling occupation figures, the use of which continued to be popular.

In his forecast for Rotterdam and the Rotterdam harbour area, the town planner Angenot (1934) combined the best of Wiebols' methods – now using age-specific fertility rates for the first time in the Netherlands – and the best of 't Hooft's (his generation life-table approach). Angenot was well aware that migration has a two-way impact on population development: firstly through mere numbers, and secondly because its age-specific character affects the fertile age categories and thus the number of births. He opted for a formal modelling approach, searching for arguments to simplify his calculations. Moreover, he was the first to introduce a matrix notation and a matrix mathematics approach to his calculations, separately for mortality/fertility and migration. His model was well ahead of but definitely not as elegant as Leslie's matrix model of 1945.

The forecasts for Amsterdam and Rotterdam stand out because of their sophistication in terms of the further innovation of forecasting methodology. They, and many others, were explicitly made to serve town planning purposes. The forecast for Amsterdam, which was inspired by the socio-economic and demographic survey work in Rückert's 1917 General Extension Plan for Tilburg, was considered to be the main building block of the 1935 General Extension Plan for Amsterdam. They were fine examples of how seriously preliminary town planning research was taken.

The conflicting plans of neighbouring municipalities as well as a growing awareness of the need to protect the valuable cultural-historical and natural landscapes of the Netherlands in the 1930s had resulted in a call for regional and metropolitan planning. Here again Van Lohuizen and Delfgaauw took the lead. Given the lack of sufficient statistical data on inter-regional migration, they demonstrated how a population forecast for a specific region could be derived from the national population forecast.

Another new development was the influx of geographers, socio-economists and sociologists in the field of preliminary town planning research. With extension planning booming, town planners were more interested in the actual designing process than in the necessary preliminary demographic and socio-economic town planning research. That task was left to geographers and other social scientists looking for jobs outside the teaching profession.
Van Lohuizen, Delfgaauw, Angenot and others demonstrated how migration could technically be integrated into the calculation schemes of Wiebols' 'demographic method'. However, they did not solve the problem of making assumptions about the future development of migration. In fact, the migration assumption part of their forecasts was rather primitive. In the eyes of the new professionals in preliminary town planning research – that is, geographers and economists – the demographic method was only second best to the preferred socio-economic method. In their view, a future labour market approach would be the best way to solve the problem of the unpredictability of future migration. Because of the time- and money-consuming complexity of this approach, the socio-economic method of population forecasting was not applied in practice, at least not in the 1930s. I have discussed the issue of demographic versus socio-economic forecasting more amply in my book on the history of population forecasting (De Gans, 1999).

4.10 Concluding remarks

Demographic statisticians and housing experts/town planners/demographers engaged in the quantitative study of the future of the population seem to have lived in separate worlds in the period prior to the Second World War. Those involved in the neo-Malthusian population issue debate appear not to have looked beyond the studies directly devoted to the population issue. On the other hand, urban and regional planners were not engaged in the study of the future size of population because of a mere academic interest in the population problem. To them, the demands of town planning practice were the starting point. These men were looking for practical solutions to the problems they encountered, merely judging and testing the practical application value of the methods at their disposal. For instance, they took no part in the debate about the Wiebols-'t Hooft controversy in national population forecasting, but simply selected the best of each method.

Oly, Wiebols and 't Hooft published for a Dutch audience only. The Dutch demographic statisticians who knew of their work and who took part in

international statistical and demographic organizations and conferences, Verrijn Stuart, Methorst and Van Zanten appear not to have been too interested in the international exchange of information on the methodological achievements in the field of 'speculations' about future population development in the Netherlands. On the contrary, Van Lohuizen, Delfgaauw and Angenot both had the opportunity and were eager to share information with colleagues from other countries. However, the exchange of information remained restricted to the international town planning forums. Information on innovative developments in demographic forecasting, applied in urban and regional planning in the 1930s, did not reach the international forums of statisticians and demographers.

In fact, the information hardly reached the international community of town planners either. Here, the fact that the propagators of preliminary town planning research had a minority position in the world of town planning was an impediment to the propagation of information about innovations at urban and regional levels. Most town planners were interested primarily in the design of the plans; their second concern was the way in which the plans were based on research (surveys). The specifics of the forecasting models underlying these foundations seem to have been the least of their concerns.

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NOTES

i. The main elements of CCPM, as it was developed in the 1920s and 1930s, are the agesex structure of the population at a specific point in time and extrapolated age-sex-specific rates of the components of population change: mortality, fertility, migration. The future size of population is calculated from the projected numbers of persons in each agesex group. Burch finds it in his contribution to this book (pp. 39-58) hard to understand why CCPM has remained so popular, notwithstanding its many strong points:

– It is a powerful and flexible abstract model of population dynamics

– It explains the past

– It results in contingent but confident prediction

– It provides a guide to future intervention

– Its mathematics is quite easy.

– The model can easily be grasped and used by geographers, planners and demographers.

ii. Cannan's approach was not completely new. For instance, as early as the mid-18th century the Dutch actuary Kersseboom had demonstrated – in the absence of integral population censuses – that the size of a population could be

estimated from a suitable life-table and assumptions with respect to the future annual numbers of newborn babies (Kersseboom, 1738-1742). For a more elaborate discussion of Cannan's contribution to population forecasting, see De Gans (1994); also Kreager in this volume**.**

iii. Also in 1907 Alfred Lotka started using the terminology of formal demography to develop his stable population theory, clarifying the relation between age structure and the components of natural population growth and between stable and real populations (Lotka, 1907).

iv. The method of geometrical progression had been introduced by William Farr at the English Registrar General's Office after the introduction of a national system of registration, and was often referred to as 'the Registrar General's method' (Willcox, 1925: 28).

v. De Gans (1999, pp. 96-97). I am indebted to Prof. Rainer Mackensen, who drew my attention to Winkler's work (Winkler, 1919; 1933) and to Prof. Nico Keilman, University of Oslo, who informed me about the population forecast made by Gunnar Jahn (Norway) (1926). For a discussion of the forecasts the the Statistisches Reichsamt, see Fleischhacker (this volume, chapter 9).

vi. "Etwas grundsätzlich anders (..) sind Vorausberechnungen des Altersaufbaues und der Bevölkerungszahl in Fortführung eines gegebenen Altersaufbaues mit Hilfe irgendwelcher Annahmen über die weitere Entwicklung der Bevölkerungsbewegung, wie sie der Verfasser zur Verdeutlichung der späteren Wirkung der Kriegsverluste wohl als erster vorgenommen hat und wie sie heute in der Bevölkerungsstatistik der vom Geburtenrückgang bedrohten Staaten üblich ist.' (Winkler, 1933, 108; also Pinwinkler, 2003, 99-104.).

vii. For a discussion of the debate, see De Gans (2002); also Kreager (this volume, chapter 5).

viii. Both Methorst's approach and the diagram he used were very similar to those of a fellow member of the International Statistical Institute, Pontus E. A. Fahlbeck (Sweden) (Fahlbeck, 1905).

ix. At first sight it is surprising that both Methorst (1922) and Verrijn Stuart (1919; 1922) were involved in calculations of future population size. Their behaviour seems to contradict the position they took towards forecasting. In their view, statisticians and statistical offices should abstain from the actual business of forecasting because the speculative aspect of forecasting could endanger the faith in the reliability of the statistical data statisticians had to supply in the first place (De Gans, 1999). It should be noted, therefore, that Methorst saw his extrapolation as a private affair. Verrijn Stuart did not consider his future

calculation to be a true forecast, but at best a self-denying forecast: he wanted to demonstrate that a continuation of the high growth rate would ultimately result in absurd situations. The societal impact of the extrapolations of Methorst (1922) and Verrijn Stuart (1919; 1922) can only be understood properly if the authoritative position of these men in the national field of statistics, economics and demography is taken into account.

x. The debate and the nature of his conceptual mistake are amply discussed in De Gans (1999).

xi. " ... la loi bien connue de parallélisme des mouvements de population" (Bertillon, 1903: 1) We are not dealing here with the issue of the relative truth of this law. It is interesting, however, to read that Saltet & Falkenburg (1907, 3 & 5) who were critical with respect to the empirical foundations of the law, did not speak of 'law' but of the 'theory of the parallelists'.

xii. Alfred Lotka worked at integrating fertility into a general dynamic theory of population. Few had thought to distinguish 'marital' fertility from 'illegitimate' fertility. This started to change only in the mid-1940s (Rosental, 2003, 104).

xiii. For a discussion of the likelihood of an independent reinvention in the Netherlands, see De Gans (1999, 78-81).

xiv. I have avoided presenting most of the figures Rooy used for his calculations. For these, see De Gans (1999, 129)

xv. The word 'everyday' is an overstatement. However, presumably many more future calculations must have been made, and some of these must now be hidden away in the archives of departments and municipalities, waiting to be discovered. The number of published forecasts, however, is small.

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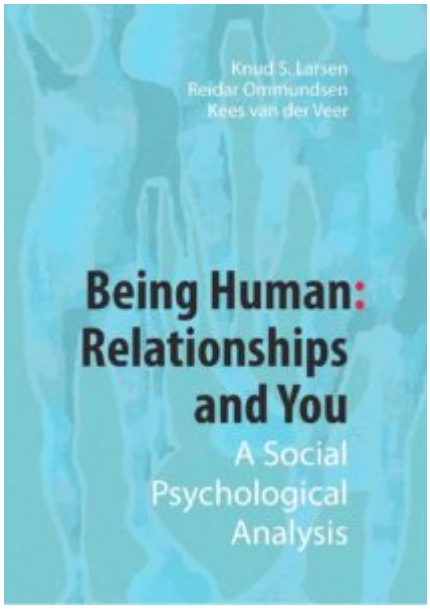
Being Human: Attraction And Relationships ~ The Journey From Initial Attachments To Romantic Love



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Many years ago two boys were walking home from school. They were seven years old, lived in the same neighborhood, but went to different grade schools. Although living close to each other they had not met before running into each other on this

day on the road leading up the hill to their neighborhood. Both seemed quite determined to assert themselves that day, and soon they began pushing each other that gradually turned to wrestling, and attempts to dominate. After what seemed hours, the two little boys were still rolling down the surrounding hills as the sun was going down. Neither succeeded in achieving victory that day. In fact, they never again exchanged blows but became the best of friends. Today it is more than 50 years later, and their friendship has endured time and distance. Friendship is like a rusty coin; all you need to do is polish it at times!

In this essay we shall examine the research on attachment, attraction and relationships. The intrinsic interest in these fields by most people is shared by social psychologists, and attachment, attraction, and love relationships constitute one of the most prolific areas of investigation in social psychology. The early attachment theory advanced by Bowlby (1982) emphasized the importance of the field when he suggested that our attachments to parents to a large extent shape all succeeding relationships in the future. Other research focus on exchange and communal relationships and point to the different ways we have of relating to each other. The importance of relationships cannot be overemphasized since we as humans have a fundamental need to belong. Relationships also contribute to the social self as discussed in the book, and effects social cognition discussed in the same (see: at the end of this article). The variables that determine attraction may be understood theoretically as functions of a reward perspective.

The importance of relationships is demonstrated by findings that show that among all age groups relationships are considered essential to happiness (Berscheid, 1985; Berscheid & Reis, 1998). The absence of close relationships makes the individual feel worthless, powerless, and alienated (Baumeister & Leary, 1995; Stroebe & Stroebe, 1996). Our very humanity is defined by our relationships (Bersheid & Regan, 2005).

1. Attachment: The start to relationships

This chapter is about the development of attachment, intimate relationships between adults, and the road leading toward love relationships. No greater love has a person than giving his life for another. This idea from the Bible brings to mind the passion of deep commitment and the willingness to sacrifice, even in the ultimate sense. This willingness to sacrifice is one manifestation of love, but as we all know there is much more to relationships and love.

The research described in the following pages concerns early attachment, and attraction and love between adults. These relationships may be institutionalized by marriage, or (registered) partnership, or take some other form (living-apart-together) in relationships. Since the vast majority of romantic relationships exist between heterosexual partners we describe the journey from attraction to romantic relationship from this perspective. There is little research so there is no way to know, however, there is no convincing reason to assume that this journey is completely different for homosexuals.

Most people will experience the delirious feelings of infatuation and love sometime in their lives. What is love? How can we achieve love? And how can we build these feelings into lasting relationships? Are there ways we can improve our chances for satisfying long-lasting and happy relationships? This chapter will show that there are behaviors to avoid, but that we can also contribute much to lasting attachments. Long-lasting romance depends on positive illusions and bringing novelty and renewal to our intimate relationships.

We live in a changing world. Although in many parts of the world couples are still united through arranged marriages, more and more modern communications are changing the ways people relate, for example learning about other culture to value freedom or the individual right to choose one's spouse. Computers provide platforms from which to initiate relationships, and opportunities to screen for important characteristics prior to any encounter. Does that take away something of the mystery of liking and loving relationships? Some do feel that how we encounter and meet people should remain in the realm of the mysterious.

However, as we shall see in this chapter, learning to like and commit to one another follows predictable patterns. The fact that divorce rates increase in the western world, suggests that we could all benefit from a greater understanding of how relationships develop, and how to make them enduring and satisfying. To give up one's life for another is a noble commitment, but to live one's life for the beloved is a different, but equally high calling. How do we move from the initial encounter of liking to romance and love and lasting commitment? We shall see that liking and love are universal behaviors, although cultures affect how they are expressed.

In this chapter we shall discuss the research from initial attachments to long

lasting relationships. Is there a basic need to belong? Does evolutionary thinking contribute to our understanding of the universality of attachment? There is evidence, as we shall see, that we all need to be connected to others, to experience a network of varying relationships. These needs are universal, present in all cultures and societies. Our needs to belong motivate our unconscious and conscious thoughts, and our behavior in the search for satisfying relationships. Without such relationships we suffer the pangs of loneliness with negative physical and psychological consequences.

1.1 An evolutionary approach to attachment

Many textbooks in psychology refer to feral children as evidence that negative consequences occur when a child grows up without normal human attachments. The child Victor was found in 1800 in the French village of Saint-Sernin. He was believed to have grown up in the forests without human contact, and proved devoid of any recognizable human characteristics. Initially he refused to wear clothes, understood no language, and never showed human emotion. This "wild boy of Aveyron" was taken into the care of Jean Itard, who devoted considerable energy to teach Victor language and human interaction. He did eventually learn some words, but never developed normal human interaction or relationships (Itard, 1801; 1962). Do feral children demonstrate the essence of human nature in the absence of relationships? We can see from the story of Victor, and that of other feral children, that what we describe as human is forged in our relationships with others. Without these interactions there is little discernable human in our behavior. Without relationships provided by parents, family, and society, we are without language with which to communicate, and without civilization to teach appropriate norms for behavior, and we have no "human nature". We are human because of our relationships.

1.2 Early attachment forms the basis for our adult relationships

What are some of the deciding factors that enable us to establish interpersonal relationships? Interpersonal relationships are essential to human satisfaction and happiness, and refer to the bonds of friendship and love that hold together two or more people over time. Interdependence is manifested by how individuals spend significant time thinking about each other, and engage in common activities, and have shared histories and memories. Although central to our understanding of what it means to be human, social psychology has a short history of studying relationships (Hartup & Stevens, 1997). Since we cannot experiment with

relationships among humans, research takes a different form. In research on relationships we face different problems with methodology than encountered elsewhere in experimental social psychology (Karney & Bradbury, 1997). Since research may affect self-awareness and the relationship ethical concerns must dictate sensitivity in the questions asked allowing us to use primarily the interview and survey methods.

Harlow (1959) performed a famous experiment with baby rhesus monkeys that supported the conclusions drawn from the studies of feral children: social isolation is traumatic and prevents normal development. In this classic study baby monkeys were raised without any contact with a mother or other monkeys. They were provided two "mother substitutes"; one was a wire feeder, and the other feeding substitute was softer and covered with terry cloth. The importance of contact was shown by the baby monkeys clinging to the terry cloth "mother", and when frightened rushing to this substitute for comfort. Like the feral children these monkeys were abnormal when they approached adolescence or adulthood. They displayed high anxiety, could not playfully interact with peers, and failed to engage in normal sexual behavior. It would appear that social interaction, particularly with parent figures, is essential for normal functioning in adulthood. What we describe as human nature would evaporate in the absence of relationships as we are socialized by our interactions. The universality of the desire to belong would suggest a biological basis similar to other biological needs.

Some will suggest that the need to belong is indeed part of our evolutionary heritage (Bercheid & Regan, 2005). No other species display a longer dependency period than humans, and we need nurturing relationships to survive. Parents who in the past failed to display essential nurturing behavior did not produce offspring that survived. We are all descendants of relationships that took parenting very serious. It is possible to perceive bonding from the very beginning of life. Initially only the mother establishes relationships by gazing at the infant, who in turn responds by cooing and smiling. That is the beginning of all subsequent bonding in the child's life. Later as the child grows, other bonds are established with the father and other family members. Throughout life a normal human being will seek out relationships responding to a biological need for companionship.

Baumeister & Leary (1995) proposed five criteria to demonstrate the fundamental biological nature of the need to belong. First, since relationships make a direct contribution to survival, an evolutionary basis is supported (Simpson & Kenrick,

1998). Evolutionary causality would require us to accept that even romantic bonds with all the giddiness and mystery are primarily vehicles that create conditions for reproduction and survival of the infants (Ellis & Malamuth, 2000; Hrdy, 1999). Without that special attachment between mother and infant the child would be unable to survive or achieve independence (Buss, 1994).

A second criterion for the evolutionary basis of relationships is the universality of the mother-child and romantic lover interdependence. As we shall see, such relationships are found in all cultures expressed with some variations. Thirdly, if relationships are a product of evolution, it should have a profound effect on social cognition. There is much support that our relationships to a significant degree define who we are, our memories, and the attributions we make in varying situations (Karney & Coombs, 2000; Reis & Downey, 1999). Fourthly, if need to belong is similar to other biological drives the desire for relationships should be satiable. When deprived we should manifest searching behavior similar to that which occurs for food or water when deprived of these essentials. Once our relationships needs are satisfied, we are no longer motivated to establish new connections (Wheeler & Nezlek, 1977), but if deprived we will seek substitutions for even close family relationships (Burkhart, 1973). Finally, according to Baumeister and Leary, if we are deprived chronically the consequences are devastating. There is a great deal of evidence that relationships are fundamental to our sense of physical and psychological well-being, and to how happy or satisfied we are (Myers, 2000b).

For those deprived, the evidence is uncontroversial. Divorced people have higher mortality rates (Lynch, 1979), whereas social integration is associated with lower death rates (Berkman, 1995). Suicide rates are higher for the divorced (Rothberg & Jones, 1987), whereas breast cancer victims are more likely to survive with support groups (Spiegel, Bloom, Kraemer, & Gottheil, 1989). Other research has shown that social support strengthens our immune and cardiovascular systems (Oxman & Hull, 1997). The literature is very clear on this. With social support we do better against all that life throws against us, without relationships we are likely to lead unhappy lives and die prematurely.

1.3 Biology versus culture

There is no more controversial issue than deciding in favor of an evolutionary or a cultural explanation of attraction. Evidence will show that women in all cultures tend to prefer partners who possess material resources, whereas men prefer

youth and beauty. However, in the human species the male is also physically larger, stronger, and more dominant. This has led to male control over material resources. Since women are more vulnerable, they are naturally more concerned with meeting these material needs. (Eagly & Wood, 1999; Wood & Eagly, 2002). The cross-cultural consistency in gender preference may simply reflect size differences and the gender based control of economic resources.

The evolutionary perspective asserts that gender based preferences have reproductive reasons. Symmetrical men are thought attractive because they signal good reproductive health. Some intriguing studies show that women who ovulate show a preference for the smell derived from "symmetric" men (Gangestad & Thornhill, 1998; Thornstead & Gangestad, 1999). Women in the ovulatory phase also prefer men who have confident and assertive self presentations (Gangestad, Simpson, Cousins, Carvar-Apgar, & Christensen, 2004). There is no definitive solution to the biology versus culture argument. Perhaps what matters is, regardless of the origin, these gender differences exist and persist.

1.4 The experience of loneliness

The psychological distress we feel when deprived of social relationships is loneliness (Perlman & Peplau, 1998). For each individual there exists an optimal number of relationships depending on age, and perhaps other factors. We join clubs, political organizations, special interest groups, and religious organizations in an effort to remove deficit in social relationships. We can have many acquaintances, but still feel lonely. Some of us feel lonely being in a crowd where social relations are plentiful, but intimacy is absent. Clearly, the answer to loneliness is not just the quantity of relationships, but whether the connections satisfy emotional needs. Some people have few relationships, and enjoy the experience of being alone. If we find in ourselves good company, our needs for others are diminished. Those who have rich emotional lives are less dependent on others for satisfaction of emotional needs.

However, many people feel the wrenching experience of loneliness. In our society it is very prevalent (Perlman & Peplau, 1998) with 25 percent reporting feeling very lonely and alienated. Some causes of loneliness are situational due to common life changes in our mobile societies. We move often, and when we do we lose some of our relationships. For example, new opportunities for work require our presence in another part of the country or abroad, and young students attend

universities away from family and friends. In these and in many other cases people lose their known social network and support groups. On some occasions we lose relationships permanently due to the death of loved ones, and the resulting grief can produce feelings of prolonged loneliness.

Other people suffer from chronic loneliness. These are people who describe themselves as “always lonely”, with continuous feelings of sadness and loss. Chronically lonely people are often in poor health, and their lives are associated with many issues of social maladjustment including alcohol abuse and depression. Loneliness is a form of stress and is associated with increased health problems resulting in death (Hawkley, Burleson, Berntson, & Cacioppo, 2003).

Weiss (1973) described two forms of loneliness. Social loneliness is produced by the absence of an adequate social network of friends. The answer to that kind of loneliness is establishing new contacts, perhaps by involvement in the community. Emotional loneliness, on the other hand is the deprivation felt from the absence of intimacy in our lives. We all need at least one significant other with whom we can share intimate thoughts and feelings, whether in the form of a friend or spouse. An emotionally lonely person may be well connected, but still feel the gnawing disquiet even in the midst of a crowd.

As we noted in the introduction, our childhood experiences predispose us toward a variety of relationship problems or enjoyments of life. Children of the divorced are at risk for loneliness, and may develop shyness and lower self-esteem (Brehm, Miller, Perlman, & Campbell, 2002). On the other hand, being in a satisfying relationship is a primary guard against feelings of loneliness, this is especially true for those who commit themselves to lifelong relationships (e.g. marriage) (Pinquart, 2003).

Demographic variables also have an effect on loneliness. Those who are poor struggle more with all forms of insecurity, and have less possibilities for participating in social relationships. For example due to lack of money poor people often cannot participate in social activities. Age is also a factor. Most may think that old age is a time of loneliness as people lose relationships to death or other causes. Some research (Perlman, 1990) however, shows that teenagers and young adults suffer most from isolation. Youth is a time when biology is insistent on connecting with others, particularly with a member of the opposite sex, and the absence of intimate relationships is felt most keenly. Some young people feel

not only lonely, but rejected and ostracized. When that occurs we see the rejection play out in severe anti-social behavior as in the case of the school shootings of recent years (Twenge, Baumeister, Tice, & Stucke, 2001).

Interacting with people affects our emotional lives. We feel better being around others, particularly in close or romantic relationships (Bolger, Davis, & Rafaeli, 2003; Delespaul, Reis, & DeVries, 1996). Unhappiness in lonely people, however, may not be due to the absence of people alone. Unhappy friends are not rewarding to be around, and they might be lonely because they are unhappy, rather than unhappy because they are lonely (Gotlib, 1992).

Our need to belong is manifest in all cultures and societies. It is obviously functional to the infant who needs protection. However, adults also could not function in society without supportive relationships. These needs to belong are universal, and if not satisfied produce many negative results. Further, our relationships help form our self-concept (chapter 2) and our most significant behaviors. Our relationships largely determine how we think about the world, and our emotional well-being.

1.5 The beginnings of attachment

Infants demonstrate stubborn attachments to their primary caregiver. This is sometimes manifested by total devotion to the mother, gazing and smiling when in contact, crying when she leaves the room. As the child gets a little older the pattern may continue, initially having nothing to do with the rest of the family. The attachments of the child may gradually change and she or he becomes fond of the father, grandmother and other relatives, proceeding normally from long attachment to the mother, to establishing new relationships with other people in her or his life. Attachment refers to the positive emotions expressed in the presence of the caregiver, the feeling of security in the child, and the desire to be with the caregiver, initially exclusively, but later with other significant others (Bowlby, 1988; Cassidy & Shaver, 1999).

The personal security and emotional warmth offered to the child is different for each caregiver. Therefore infants develop different attachment styles that in turn have profound effect on adult relationships. Ainsworth, Blehar, Waters, & Wall (1978) proposed three infant attachment styles. *The secure attachment* occurs when the caregiver is available, and the infant feels secure, and when the child's emotional needs are met. *The avoidant attachment* occurs when the caregiver is

detached, unresponsive to the infant, and when in some cases the infant is rejected. This type of attachment leads to premature detachment and self-reliance. When the parent figure is at times available, but at other times not, and therefore is inconsistent in meeting the emotional needs of the child, the result is *an anxious-ambivalent attachment* style. This type of infant may be anxious and often feel threatened.

Essentially the three attachment styles develop in response to the caregiver's emotional behavior; i.e., how consistent the emotional needs are met, and how secure the child feels as a consequence. From the perspective of evolutionary theory, attachment has obvious survival value for the infant. If mothers did not find the baby's cooing and smile endearing, and if the infant did not find her presence so reassuring, the lack of attachment could be disastrous for the infant. Infants and small children cannot survive without parental attention, so both the caregiver's behavior and infant's responses are very functional to the survival of the human species.

1.6 Attachment styles of adults

How comfortable are we with our relationships, and to what degree can we form secure and intimate relations with family, friends, and lovers? Hazan & Shaver (1987) found that adults continue with the same attachment styles adopted as infants. Whether an adult is secure in relationships, and can foster shared intimacy, depends on the three attachment styles described above. Psychoanalysis asserted that our childhood experiences have profound effects on adult behavior.

The attachment theorist likewise believes that the relationship styles developed as infants are stable across a person's lifetime. Infant attachment styles determine whom we associate with as adults and the quality of our relationships. Some longitudinal studies have in fact demonstrated attachment styles developed early in life determine how we later relate to our love partners, our friends, and eventually our own children (Fraley & Spieker, 2003; Kirkpatrick & Hazan, 1994). Other researchers however, have found changes between infant and adult attachment styles (Baldwin & Fehr, 1995). The infant's relationship with the primary caregiver is critical to the success of adult relationships. However, there is some hope that we can change from infant maladaptive styles to more functional adult behaviors and relationship satisfaction.

Life events may also influence our ability to form secure relationships. Traumatic events that separate us from beloved family members through death or divorce, affect our ability to develop intimate relations. So does childhood abuse, or family instability (Brennan & Shaver, 1993; Klohnen & Bera, 1998). Within intimate relationships the type of attachment has profound effects (Collins & Feeney, 2000; Fraley & Shaver, 1996). How we say goodbye, for example, at train stations and airports is reflective of our attachment styles. Avoidant romantic partners spent less time giving embraces, whereas those who were anxious expressed sadness and fear when separating. How we express attachment may vary with culture. Being reserved is not universally diagnostic of having an avoidant attachment style.

1.7 Secure attachment styles bring many benefits

Secure individuals bring out the best in others. Even when significant others display negative behaviors such as unjustified criticisms, the secure person will see that behavior in a positive light (Collins, 1996). A secure and positive outlook brings its own rewards. These include, not surprisingly, more relationship satisfaction. Secure partners are less likely to break up the relationship, and more likely to stay married, they experience fewer marital tensions, and generally fewer general negative outcomes (Shaver & Brennan, 1992; Mikulincer & Shaver, 2003). On the other hand, anxious people are more likely to perceive threat. They view life events in pessimistic ways leading to depression, substance abuse, and eating disorders. Our early bonds with caregivers matter a great deal as we move on in life. These attachment styles have significant effects on our current relationships, and our own sense of well-being. Secure life styles based on a good

start in life produce healthier relationships, and good personal health.

2. Culture and socialization produce different relationships
Fiske (1991; 1992) proposed a theory of relationships that suggest that we behave in four distinct ways in defining who we are, how we distribute resources, and how we make moral judgments. A *communal relationship* put the interest of the group ahead of that of the individual. Types of groups in this category include families, or close social allies. In families what we contribute depends on what we can offer, and what is right to receive depends on the needs of the individual informed by benevolence and caring. In a family, children are different and require different resources. One child may be intellectually gifted, and parental care may be shown by support for education. Disproportionate support for one child may result in fewer resources for another child. In communal groups or families, resource distribution is decided by the needs of each member, and desire to help all.

In the *authority ranking groups* the status and ranking hierarchy is what matters. Members of these groups are aware of the status differences, and roles tend to be clearly specified. Military organizations are examples, but so are modern capitalist organizations that depend on a top down authoritarian structure. Tribal organizations are usually also authoritarian, and the chief determines who does what, and in what way performance is rewarded or punished.

The third type of relationship is *equality matching*. These relationships are based on equality in resources and preferred outcomes. Many friendships and marriages are governed by some norm of equality. Members should have on the average the same rights, constraints or freedoms. The essential question asked in response to any requests or demands is: is it fair? Is it also applicable to the capitalist market system based on the market pricing relationships. Fourth, relationships emerging from the market economy are governed in principle by *equity*, by what is considered fair. Salaries should be based on merit and equity, where the compensation received is proportional to the quality and effort made by the individual (for example if you cannot pay for medical help, then you get none). While Fiske claims these four types are universal, some relationships are emphasized in a particular culture. Capitalist societies rely on market pricing relationships, and increasingly we are seeing similar relationships in current and formerly socialist countries.

2.1 The child in the relationship

Many social psychologists find attachment theory useful in understanding the relationships between adults both platonic and romantic (Hazan & Shaver, 1987). They are interested in what ways adult love relationships are similar to the attachment patterns of infants. It seems that the intense fascination with the love object, parent or lover, is similar. The adult lover may gaze with intense fascination into the eyes of the beloved, much as the infant gazes into the eyes of the mother. Lovers feel distress at separation, as do infants when the mother leaves the room. In both situations strong efforts are made to be together, spend time together and avoid separation.

Adult love relationships also fall into the three attachment patterns described for children. One study showed that the majority of US citizens (59 %) are securely attached, whereas 25 percent are avoidant, and 11 percent are anxious-ambivalent (Mickelson, Kessler, & Shaver, 1997). There are differences as well, as adult relationships involve reciprocal care, and in some cases sexual attraction. Still, the mother would not gaze at the infant unless she found it very rewarding, and there is some reciprocal behavior there. The mother loves her child and is rewarded by adorable gazing and smiles of the infant.

Some psychologists feel that this early model of love becomes a working framework for later relationships. The infant who has secure attachments with parents comes to believe that similar relationships can be established as an adult, that people are good and can be trusted. On the other hand the anxious-ambivalent attachment may produce fear, rejection of intimacy, and distrust in the relationship in the adult. The burden of the generations occurs when a parent passes on to the next generation the attachment style he developed as an infant. The rejection a mother experienced as an infant may become the working model for her child rearing when she is a parent.

There is hope for victims of dysfunctional attachment styles. Sometimes an adult love relationship is so powerful that it can overcome any negative experiences from childhood. On the whole however, absent any major event affecting attachment, there is great stability in attachment styles across the life span (Fraley, 2002; Collins & Feeney, 2004). Secure adults are comfortable with intimacy and feel worthy of receiving affection from another person. As a consequence, they also perceive happiness and joy in their love relationships built on self-disclosure and shared activities. It should come as no surprise that secure

individuals also have positive perceptions of parents as loving and fair. Later in life secure people develop more satisfying relationships. Secure people experience more satisfying intimacy and enjoyment, and feel positive emotions in their relationships (Tidwell, Reis, & Shaver, 1996). When life becomes stressful, secure individuals provide more mutual support, and are more effective and responsive to the partners needs (Feeney & Collins, 2001; Feeney & Hohaus, 2001). Avoidant persons, on the other hand, are often uncomfortable in getting intimate, and never develop full trust in the love partner. They spend much time denying love needs, do not self disclose, and place more importance on being independent and self-reliant. The anxious- ambivalent person wants to become intimate, but worry that the other person does not feel the same. Anxious adults tend to be obsessed with the object of love, experience emotional highs and lows, feel intense sexual attraction, and jealousy. They often feel unappreciated by their partners, and view their parents as being unhappy.

2.2 The transfer effect in our relationships

The transfer effect is well known in clinical psychology. In the effort to help the patient the therapist allows the patient to transfer feelings from some other significant other to the therapist. Temporarily the therapist becomes the father figure, or some other significant person in the therapeutic relationship. We have all met people who remind us of others. The authors have all had the experience of meeting someone who was certain to have met one of us before, or believed we were closely related to someone they knew. Does the professor of this class remind you of a favored uncle or aunt? Chances are that you will transfer positive feelings toward the professor, and with such an auspicious beginning the outcome may be very good for your study. The relational self-theory is based on the idea that our prior relationships determine how we feel toward those who remind us of such significant others from our past.

Andersen & Chen (2002) developed the idea of relational self-theory to demonstrate how prior relationships affect our current cognitions and interactions with others. They hypothesized that when we encounter someone who reminds us of a significant other from the past we are likely to activate a relational self that determines our interactions with the new person. Meeting people who remind us of past significant others even has emotional consequences. In one study the researchers assessed the participant’s emotional expressions after being exposed to information that resembled a positive or

negative significant other from the past (Andersen, Reznik, & Manzella, 1996). The participants expressed more positive emotion as judged by facial expressions after being exposed to information about a past positive significant other, and more negative facial expressions after exposure to the information of a negative person.

Our past relationships also determine our current interactions. When we interact with someone who reminds us of someone else it affects our self-concept and behavior (Hinkley & Andersen, 1996). Encountering such a person alters how we think of ourselves, and the past relationship may affect our behavior at the automatic level (Andersen, Reznik, & Manzella, 1996). This finding helps explain our preference for some individuals, and our rejection of others. Positive emotions result from being in the presence of people who remind us of previous positive relations. However, we should remind ourselves that these gut feelings are not the consequence of actual behavior or interactions. Any immediate dislike may have more to do with unpleasant relations of the past, than the person with whom you are currently interacting.

2.3 Social cognition and previous relationships

We construe the world through processes of social cognition. Previous relationships affect how we come about this construction of the world. This is logical when we realize that relationships form the basis of many of our memories. In one study, for instance, participants were better able to remember information based on relationships than other sources of information (Sedikides, Olsen, & Reis, 1993).

We tend to be optimistic about self and close friends believing that the outcomes of life will be positive for ourselves and those with whom we relate (Perlof & Fetzer, 1986), and we include close others in our attributional biases assessing more positive traits and behaviors to partners in close relationships. Success for self and friends is attributed to dispositional causes, while failures are attributed to the situational environment (Fincham & Bradbury, 1993). Close others become in a very real sense a part of the self-concept (Aron & Aron, 1997; Aron & Fraley, 1999). A relationship helps to expand the self-concept by utilizing the resources and characteristics of the other person. These characteristics then become part of the self-concept. This became very visible to us when a close follower of a prominent leader we knew took on characteristics of the admired leader, even to the point of mimicking his speech patterns. Later this same individual married the

former wife of the leader, and served as the director of the leader's institute. Relationships are functional because of the self-concept expansion (Wegner, Erber, & Raymond, 1991). So-called transactive memory is demonstrated when partners know each other so well, that they can complete stories told by the other partner, and remember more information than two randomly paired people. Partners also collaborate in remembering facts. In driving to locations one partner may have good understanding of direction and long distance goals, and the other may remember specific street locations. Collaborative memory is based on such close relationships. Social cognition is central to an understanding of social psychology and will be discussed in detail in chapter 4.

3. Liking someone: the start of relationships

Why do we like some people and not others? Our past relationships with parents and close significant others have profound effects on attachment and liking, but that only partly answers the question of attraction. Another answer to what motivates people to embark on a relationship is its contribution to survival and success. However, the average person probably does not evaluate attraction to others on such a calculating basis. That is to say, when it comes to understanding deeper levels of motivation, we like those who are associated with rewarding events and whose behavior is intrinsically rewarding. We dislike those whose behaviors are a burden to us. At the level of motivation, conscious or unconscious, we seek to maximize our rewards and minimize costs. We seek relationships and continue in these if the rewards exceed the costs and therefore yield a profit (Kelley, 1979; Kelley & Thibaut, 1978; Rusbult, 1980).

3.1 Antecedents of attraction

Propinquity, similarity and physical attraction have been studied extensively by social psychologists. Many would consider these to be obvious variables in interpersonal attraction. Yet, in our culture we say, "beauty is only skin deep", thereby denigrating the potential influence of physical attractiveness. As we shall see beauty is much more than skin deep, and along with similarity and propinquity have profound effects on whom we like, and on our relationships and social successes.

3.2 Propinquity: we like those living near us

Some of the very earliest research on attraction focused on the proximity of relationships (Festinger, Schachter, & Back, 1950). These early researchers performed a sociometric study in a housing complex for married students at MIT

called Westgate West. The residents were asked to name their three closest friends. The majority of the respondents named people who lived in the same building, even though other housing units were nearby. Even within the building proximity was a striking factor, with 41 percent naming their next-door neighbors as best friends, 22 percent named those living two doors away, and only 10 percent pointed to those living at the end of hallways as close friends. The critical factor was the chance of coming in contact. Festinger et al. called this functional distance.

Although there are exceptions when we come to dislike people living next door the result of Festinger and colleagues is a very optimistic finding of social psychology. It suggests that most people have the capacity for friendships if only given the opportunity. This might even be extended to the most intimate relationships. Rather than waiting for the one and only knight on the white horse, or Cinderella, as romantic illusions would have you do, propinquity findings would suggest that there are millions of potential partners if only given the chance for encounters.

3.3 Mere exposure and familiarity

What is it about being given the chance to meet that leads to liking? Some research would indicate that proximity brings on a sense of familiarity that leads to liking (Borstein, 1989; Moreland & Zajonc, 1982; Zajonc, 1968). In the literature it is called the "mere exposure effect". The more we see people the more we like them, so proximity is about familiarity. Then why does familiarity produce liking? Is there some sense of security that comes from knowing that the familiar produces no harm? Is it an evolutionary mechanism where the familiar reduces threat? Do we have an innate fear of the unfamiliar? Are strangers a threat, because we do not know enough about them to predict their behavior? Perhaps it is. Perhaps we like those who are familiar, because we can predict their behavior and they are non-threatening. Milgram (1970) suggested that the fear of living in large cities among strangers was eased by seeing the same faces or "familiar strangers" – as they passed on their way to work.

A study by Moreland and Beach (1992) showed that the "mere exposure" produced liking. They had female confederates attend class sitting in the first row. There was otherwise no interaction between the female confederates, the instructor, or other students. Yet, when asked at the end of the term, the students rated these women highly for both liking and attractiveness. The literature

supports the idea that familiarity promotes liking (Bornstein, 1989; Moreland & Zajonc, 1982). There is one caveat. If you find yourself instantly disliking what you consider an obnoxious person, exposure will intensify that effect (Swap, 1977).

Still a large amount of literature has been published supporting the "mere exposure" effect (Borstein, 1989; Zajonc, 1968). For example there are strong correlations between the frequency of exposure to a variety of objects and liking. Flowers that are mentioned more frequently in our literature are liked more than those mentioned less frequently, e.g., violets are liked more than hyacinths. People, at least in the US, also like pine trees more than birches, and like frequently mentioned cities more than those less well known. Zajonc argues that it is the mere exposure effect. However, on the other hand perhaps people write more about violets than hyacinths because they are liked more? How do we explain the preferences for different letters in the English alphabet that correspond to the frequency of appearance in writing (Alluisi & Adams, 1962)? We also tend to see letters in our own name more frequently, and have a greater liking for these letters (Hoorens, Nuttin, Herman, & Pavakanun, 1990).

In another study the more the participants were exposed to words they did not understand (Turkish words or Chinese pictographs) the more they liked them (Zajonc, 1968). Still, even "mere exposure" effects must have an explanation in term of rewards or the absence of threats that familiarity brings from repeated exposure. Zajonc (2001) recently explained the "mere exposure' effect as a form of classical conditioning. The stimulus is paired with something desirable, namely the absence of any aversive conditions. Therefore over time we learn to approach those objects considered "safe' and avoid those that are unfamiliar.

Computers are often used to make contact these days. Keeping in mind that it is the "functional distance" which is important, how does computer technology contribute to establishing new relationships? (Lea & Spears, 1995). All modern tools of communication can be used either for ethical or unethical purposes. There are predators online who lie or manipulate to take advantage of innocent young people. It is not safe. Online the individual has no way to confirm the truth of what another person is saying. Person-to-person we can check for all the nonverbal signals that we have learned from experience indicating truthfulness and trust. On the other hand, we do not have to worry much about rejection in Internet relationships, so perhaps we have less to loose and therefore can be

more honest online? We can more quickly establish intimate relationships, but we may in the process idealize the other person. Only face-to-face can we decide what is real, and even then we may idealize, although as we will see this can be healthy for long term relationship survival.

Proximity effects means that we often marry people who live in the same neighborhoods, or work for the same firm (Burr, 1973; Clarke, 1952). The variable is optimistic about meeting someone because our world of potential relationships is unlimited. If our eyes are open we can find a mate somewhere close by, certainly within walking distance. Perhaps proximity also points to other forms of interpersonal similarity. Generally people living in the same neighborhoods often also come from similar social classes, ethnic groups, and in some parts of the world from the same religious groups. Proximity may therefore also be another way of pointing to similarity as a basis for liking. Familiarity provides the basis for sharing, and the gradual building of trust (Latané, Liu, Bonevento, & Zheng, 1995). The vast majority of those who have had memorable interactions leading to intimacy lived either at the same residence or within one mile from the trusted person.

The mere exposure effect can also be discerned in peoples' reactions to their own faces. Faces are not completely symmetrical as most of us display some asymmetry where the left side of the face does not perfectly match the right. Our face to a friend looks different from that we see our selves. The mirror image with which we are familiar is reverse from that which the world sees. If familiarity or mere exposure has an effect, our friends should like the face to which they are accustomed, whereas the individual should also like the mirror image with which he is familiar. Mita, Dermer, & Knight (1977) showed that the participants liked best the face with which they were most familiar.

3.4 Proximity and anticipating the cost of negative relationships

Proximity, moreover, reduces the cost of interaction. It takes a great deal of effort and expense to maintain long distance relationships. As a result of our work we have relationships in different parts of the world. As the years go by it is more and more difficult to continue with friendships that when we were young we thought would last forever. When you do not see someone in the course of daily activities it takes more effort, and may be costly in other ways. Long distance relationships take more dedication, time, and expense.

Proximity may exert pressures toward liking. It is difficult living or working with someone we dislike. That cognitive dissonance may cause us to remove stress by stronger efforts of liking the individual. Therefore, even the anticipation of interaction will increase liking, because we want to get along (Berscheid, Graziano, Monson, & Dermer, 1976). When we know we will interact with someone over time we are likely to focus on the positive qualities, as the alternative is too costly. Think of working with a boss you do not like, how costly that could be? Therefore we put our best foot forward when we meet people who may become part of our daily lives. Even the anticipation of interaction with others produce liking. Why else would people make extraordinary efforts to be nice at "get acquainted parties" at work, or in new neighborhoods? Putting your best foot forward is a strategy to produce reciprocal liking.

4. Similarity: rubbing our back

We like to be massaged, and therefore like those who validate and reinforce who we are and what we believe. The research literature supports this proposition (Bercheid & Reis, 1998; Ptacek & Dodge, 1995; Rosenblatt & Greenberg, 1988). It will come as no surprise that we tend to find our spouse among those who are similar to us on many different characteristics including race, religion, and political persuasion (Burgess & Wallin, 1953). Showing again the opportunistic nature of our most intimate relationships, similarity in social class and religion were the strongest predictors of liking.

Similarity of religion or social class may just be frequency or proximity factors, as the likelihood of exposure is greater for these categories. Similarity in physical attractiveness also plays a role and personality characteristics, although to a lesser extent (Buss, 1984). In a classic study, Newcomb (1961) showed that after a year of living together, student's liking of roommates was determined by how similar they were. In other studies where the participants thought they were rating another participant (in fact a bogus participant) either similar or dissimilar, the similar person was liked more (Byrne, 1961; Tan & Singh, 1995). The similarity effect holds true across a variety of relationships including friendship and marriage.

Similarity in education and even age seems to determine attraction (Kupersmidt, DeRosier, & Patterson, 1995). Not only are friends similar in social class and education, but also gender, academic achievement, and social behavior. A meta-analysis of 80 separate studies showed moderate relationships between similarity

and attraction (AhYun, 2002). Today dating services are established on the principle that similarity is good and functional in relationships. A good match means finding someone who is similar. Dating services try to match after background checks and participant surveys of values, attitudes, and even physical appearance (Hill & Peplau, 1998). Those participants who were matched in attitudes toward gender roles and sexual behavior had the most lasting relationships, one year and even 15 years later.

4.1 How does similarity work?

As mentioned above similarity is a potent variable in friendship and mate selection. What are some of the mechanisms that produce this effect? Similarity gives a common platform for understanding, and that in turn promotes feelings of intimacy essential for trust, empathy and long lasting relationships (Aron, 1988; Kalick & Hamilton, 1988). If the issue is important only those with the same or similar values are acceptable. So attraction is selective and we rarely encounter those whose views are different. In relationships where the participant committed to someone with different values, or where the parties successfully hide their views, similarity could still be the outcome. Typically long time married couples have similar views because over time they persuade the partner to change his/her mind. Social influence may also change our views over time and produce more similarity.

We find pleasure in our relationships with similar others because they confirm our beliefs and the value of our person. When we meet with likeminded people, they validate our inner most values and expressed attitudes. The rest of the world may cast doubt on our beliefs, and may question who we are as persons, but the likeminded validate our ideologies and personal achievements. Even our physiological arousal corresponds to our liking someone (Clore & Gormly, 1974). Similarity allows for functional relationships and for more effective communication. When we are with those who are similar, communication is effortless, since we do not have to be on guard for disagreement or rejection.

4.2 A common social environment

Of course the social environment also has a selectivity bias. People meet likeminded people at Church, or those with similar occupational interests at work. In many cases the apparent similarity is caused by the selectivity of our social environment. A politically progressive person does not attend meetings of the Ku Klux Klan (a racist group) in order to find a soul mate. A longitudinal study of

married couples showed that couples became more and more similar over time as they continued to persuade and experience a shared environment (Gruber-Baldini, Shai, & Willis, 1995).

We choose our friends from our social environment. In college we find our friends among those who are on the same track academically and can be of mutual aid (Kubitschek & Hallinan, 1998). Being in the same environment produces shared experiences and memories that serve to bond people. We perceive similarity and from that conclude that the other person will like us, thereby initiating communication (Berscheid, 1985). It is reinforcing to meet someone with similar views, as they validate our feelings of being right (Byrne & Clore, 1970). At the same time and for the same reasons we find those who disagree unpleasant (Rosenbaum, 1986; Houts, Robins, & Huston, 1996). As a result of having a common basis, similarity in personality traits provides for smooth communications and interactions between people, therefore similarity is less costly.

4.3 We like those who like us: reciprocal liking

Reciprocal liking is even a more powerful determinant of liking than similarity. In one study a young woman expressed an interest in a male participant by eye contact, listening with rapt attention, and leaning forward with interest. Even when told she had different views the male participants still expressed great liking for the woman (Gold, Ryckman, & Mosley, 1984). Regardless whether we show by means of verbal or non-verbal responses, the most significant factor determining our liking of another person is the belief that the person likes us (Berscheid & Walster, 1978; Kenny, 1994). When we come to believe someone likes us we behave in ways that encourage mutual liking. We express more warmth, and are more likely to disclose, and behave in a pleasant way. So liking someone works like a self-fulfilling prophecy. Expressing liking elicits pleasant behavior and reciprocal liking (Curtis & Miller, 1986).

4.4 Personal characteristics associated with liking

Physical attractiveness is very culturally bound. In some societies voluptuous women are considered beautiful, while in our society the fashion industry and the media define attractiveness as being thin. When it comes to personality based characteristics two factors lead to liking. We like people who show warmth toward others, and people who are socially competent (Lydon, Jamieson, & Zanna, 1988). Warm people are those who have an optimistic outlook on life and people. We like them because they are a source of encouragement in an otherwise

discouraging world. Warm people are a pleasure to be around and therefore rewarding. In one study (Folkes & Sears, 1977) the researchers had the participants listen to an interviewee evaluate a variety of objects including movie stars, cities, political leaders. Sometimes the interviewees expressed negativity toward these objects, in other cases positive views. The participants expressed a greater liking for the interviewee who expressed positive views, i.e. displayed warmth toward the rated people and objects.

4.5 Communication skills

Likewise we like more the socially skilled. Social intelligence can be demonstrated by being a good conversationalist. Skilled speakers were seen as more likeable, whereas boring communicators were not only rated as less likeable, but also as less friendly and more impersonal (Leary, Rogers, Canfield, & Coe, 1986). Obviously communication skills are essential to long-lasting relationships. We are especially fond of people whose ways of relating to others are similar to our own (Burleson & Samter, 1996). Those with high communication skills saw interactions as complex with highly valued psychological components. People with low skill levels saw communications as more straightforward and less complicated. To communicate at the same level is a very important aspect of attraction and liking. Operating at the same skill level is rewarding, as we feel empathy and understanding. Those who do not share the same level of communications are less likely to develop long-lasting relationships (Burleson, 1994; Duck & Pittman, 1994).

4.6 Complementarity: Do opposites attract?

The importance of similarity suggests “birds of a feather flock together”. But are we not also told that opposites attract? Do tall dark men not prefer short attractive blonds? What about the assertive person meeting the less dominant individual? Or the person who has a rich fantasy life marrying the realist? Are there not times when opposites attract because in some ways we complement each other? Certainly, for sexual relations the vast majority of humankind seeks the opposite sex, only a minority is attracted to similarity. The masculine and feminine is the supreme example from nature that opposites attract.

Complementary personality traits produce liking for only a few personality traits (Levinger, 1964; Winch, 1955). On the whole, however, most studies fail to find evidence that complementarities attract in relationships (Antill, 1983; Levinger, Senn, & Jorgensen, 1970; Neimeyer & Mitchell, 1988). When complementarities

lead to attraction, it appears to be a rare exception to the dominant effect of similarity. Even in cases where personalities are complementary on some traits, they have many more similar traits in common.

4.7 Ethnicity and relationships

Ethnic identification is only one dimension of similarity. Interracial couples are similar in other significant ways, in attitudes and values. The dissimilarity is, however, more prominent and is judged more prominently by society which affects an individual evaluation of the dissimilarity. But the significance of similarity in interethnic friendships is less important today than in former times. For example more and more US citizens are dating and marrying outside their own racial and ethnic groups (Fears & Deane, 2001). Attitudes toward interracial relationships and marriage are becoming increasingly accepted in society, and interracial marriages are on the increase. The vast majority of all racial groups in the US approve of interracial marriages today (Goodheart, 2004).

The studies which support interracial tolerance in intimate relationships appear to differ with the public opinion survey to be cited in chapter 9 which indicated parents prefer similarity of race for their daughters. The conclusion of the public opinion survey was that social norms now favor such relationships. However, when the respondents were asked something more personal namely, how would they feel if their daughter would be part of an interracial marriage, the outcome was slightly different. The respondents preferred that their daughter not be a part of an interracial relationship. People are willing to give the normative correct responses to surveys, but hold private and subtler negative attitudes when it affects members of their own family. It must be said, however, that negative evaluations of interracial relationships occur before a relationship is established. Once an interracial relationship is a fact, many opinions change in favor of family harmony and acceptance.

5. Physical Attractiveness: A recommendation for success!

Physical attraction is a powerful determinant of liking and has lifelong benefits. Attend any social event and who do you first notice? If you are a heterosexual man, you will first notice the attractive women, and if you are a woman your eyes will feast on the handsome men. As we shall see there are little differences between the sexes in the appeal of physical attractiveness. First impressions are important, as without these few people would initiate contact. So while physical attractiveness is important in the early phases of a relationship, the benefits

continue in a variety of ways.

Notwithstanding the proverb “beauty is only skin deep”, most people behave strongly to physical attraction. There may even be a biological basis as preferences for attractive appearance occur early in life. Fortunately “love is blind”, and we also tend to find those whom we love to be attractive (Kniffin & Wilson, 2004). Since we idealize the beloved we observe beauty where others fail to see it (Murray & Holmes, 1997). Then there is always the case of the “ugly duckling” that later grew into a beautiful swan. Physical development sometimes brings beauty later in life (Zebrowitz, 1997).

In a now classic study (Walster, Aronson, Abrahams, & Rottman, 1966) the researchers randomly assigned freshmen at the University of Minnesota for dates to a dance. The students had previously taken a number of personality measures and aptitude tests. Participants had also been rated independently on physical attractiveness. Having spent a short time dancing and talking, the couples were asked to indicate liking and desire to meet the person again. Perhaps there was insufficient time to evaluate the complex aspects of the date’s personality, but the overriding factor in liking was the physical attractiveness of the date. It is also common to think that men pay more attention to women’s attractiveness than women do to male bodies. However, in this study there were no differences as female as well as males expressed preferences for physical attractiveness.

5.1 Women like attractive men: Imagine!

Despite the common stereotype that women are attracted to the deeper aspects of a person’s character, such as intelligence and competence, women, like men, are impressed by physical attractiveness. They pay as much attention to a handsome man as men do to beautiful women (Duck, 1994a; 1994b; Speed & Gangestad, 1997; Woll, 1986). However, a meta-analysis showed a slightly greater effect for physical attractiveness in men than in women (Feingold, 1990), and some studies supported the stereotype of stronger male preferences for physical attractiveness (Buss, 1989; Howard, Blumstein, & Schwartz, 1987). The contradictions are easy to explain when we remember the different norms governing the attractiveness issue for men and women. Men are more likely to respond to the common and accepted stereotype that physical attractiveness is important for men, whereas women respond to their stereotype that other traits matter. But in actual behavioral preferences there are few differences. In sexual preferences both men and women rate physical attractiveness as the single most important variable

(Regan & Berscheid, 1997).

Physical attractiveness probably has biological roots as both genders think it is the single most important trait in eliciting sexual desire (Graziano, Jensen-Campbell, Shebilske, & Lundgren, 1993; Regan & Berscheid, 1995). In one study women participants looked at a photograph of either an attractive or unattractive man, and were led to believe they spoke with him on the phone (Andersen & Bem, 1981). The two photos were used to elicit the physical attractiveness or unattractiveness stereotype. The respondents in both the attractive and unattractive conditions spoke to the same person.

The purpose here, as in the previous study with men (Snyder, Tanke, & Berscheid, 1977), was to see if the women's perceptions of likeability would change depending on whom they thought they were speaking with, an attractive or unattractive man. The "beautiful is good" stereotype also worked for women. When they believed they spoke to an attractive man they perceived him to be more sociable and likeable, compared to when they thought they "talked" to the unattractive man. Later meta-analyses across numerous studies (Eagly, Ashmore, Makhijani, & Longo, 1991; Feingold, 1992; Langlois, Kalakanis, Rubenstein, Larson, Hallam, & Smoot, 2000) produced convincing evidence that physical attractiveness is an important factor also in women's lives.

5.2 As society sees it: the social advantages of the physically attractive

For both sexes and in nearly all the arenas of life the physical attractiveness of both sexes has profound advantages. The attractive person is more popular with both sexes (Curran & Lippold, 1975; Reis, Nezlek, & Wheeler, 1980). In the new age of video dating, participants show strong preferences for attractive potential dates (Woll, 1986). Are those who seek out video dating more shallow? Have they impossible high standards encouraged by Playboy and Glamour magazine? Perhaps, but attractiveness continues to be a positive trait across many forms of social interactions. When an attractive and unattractive confederate is presented as "author" of a novel, the novel is judged better if the participants believe it written by the "attractive author" (Cash & Trimer, 1984; Maruyama & Miller, 1981). Studies have also demonstrated direct effects in the workplace. Individuals make more money the higher their rating on physical attractiveness (Frieze, Oleson, & Russell, 1991; Roszell, Kennedy, & Grabb, 1989). Good looking victims are more likely to receive assistance (West & Brown, 1975), and good looking criminals to receive lower sentence (Stewart, 1980).

5.3 Some gender differences

However, the physical attractiveness factor may be muted for women, and compromises are sometimes made when evaluating a desirable long-term relationship involving the raising of children and the creation of a family. In the committed partnership women recognize also the importance of other traits like integrity, income potential, and stability. They are therefore more willing to marry a partner who is less than perfect in physical appearance. Perhaps for similar reasons women also prefer older partners, whereas men have a preference for youthful women. If the goal of the relationship is family development, women also pay more attention to the economic potential of their partners, whereas this is an indifferent issue for most men (Sprecher, Sullivan, & Hatfield, 1994). For men physical attractiveness is a necessity, whereas for women, while still important, it is more like a luxury. A partner's status and access to resources on the other hand were considered a necessity for women, but a luxury for men (Li, Bailey, Kenrick, & Linsenmeier, 2002). In selecting long term partners, women gave more importance to a man's warmth, trustworthiness, and status, whereas men placed more emphasis on the potential partners attractiveness and vitality (Fletcher, Tither, O'Loughlin, Friesen, & Overall, 2004). So there are some consistent gender differences.

5.4 What do gender differences in partner preference mean?

Evolutionary psychology would assert that gender differences exist because they are functional to the survival of the species. "What leads to maximum reproductive success?" is the question posed by evolutionary psychology (Buss & Kenrick, 1998). Women invest much effort and time in bringing a child into the world. To be successful in reproduction requires that women have stable partners with adequate economic and other resources. In the days of the caveman that meant a good cave, warm fire, and ability to provide game. In our day women look for good earning potential. Men on the other hand invest little, and can impregnate several females. For men therefore the key factor is physical attractiveness. In our evolutionary history men learned that youth and attractiveness is more sexually arousing, and incidentally these qualities in women are associated with fertility and health – men are not looking for fertility and health in the first place, but for good sex.

sociocultural perspective points to the different roles played by the genders historically (Eagly & Wood, 1999). Men have throughout history been the

providers and builders of material comfort; women have been the homemakers. The greater interest in a man's economic potential grew from the unfavorable position of women who even today earn less than men for comparable work. As noted some cross-cultural data (Eagly & Wood, 1999), sex differences in preferences for mates have shifted as women have made socio-economic gains. Other research shows that preferences leading to mate selection have changed, especially over the last number of decades of improved socioeconomic possibilities for women (Buss, Shackelford, Kirkpatrick, & Larson, 2001). Men in many Western countries now think it is a good idea that women earn money, and both sexes place more importance on physical attractiveness. So perhaps physical attractiveness was always important for women also, but confounded by the need for socio-economic support.

5.5 Selecting our mates: gender specific wanted ads in newspapers

Evolution has instilled the majority of both sexes with the desire to reproduce with mates who signal good reproductive health. Heterosexual men and women differ however, in the burden of bringing children into the world, and looking after their babies during the most vulnerable period. This gender difference would suggest that women would be more selective in their choices, as they have more at stake. In all societies studied men are more promiscuous, and women exercise more care in selecting partners, especially for long term relationships (Schmitt, 2003).

Men are attracted to fertility and physical qualities that happen to be associated with fertility, and therefore toward feminine features signaling youth (Singh, 1993). Women on the other hand, with a shorter biological clock, intuitively look for men who have the capacity and desire to invest in their children, and have a good economic future. In fact this difference can be observed weekly in the personal ads that appear in many local papers. Typically men seek youth and attractiveness whereas women seek accomplishments and economic resources (Kenrick & Keefe, 1992; Rajecki, Bledso, & Rasmussen, 1991). Support for this gender difference was found cross-culturally in a study of 37 different societies (Buss, 1989). In all cultures men rated physical attractiveness as more important in a mate, and they preferred younger partners. Women on the other hand preferred partners who were older, and who could provide material resources.

Consistent with the sociocultural perspective, gender differences in mate preferences have shifted somewhat across many cultures as women have gained

more socio-economic and political power (Eagly & Wood, 1999). However, these recent changes have not removed fully the historical gender preferences. Men still rank good looks and health higher than women, and women rank the financial prospects of potential mates higher than men. These results call for an interactionist point of view. Gender differences are a function of both our evolutionary past, and our socio-cultural heritage, and it is unlikely we can separate one from the other.

5.6 Social attributions: What we believe about the physical attractive

All cultures have stereotypes that attribute positive qualities to the physically attractive. Dion, Berscheid, & Walster (1972) call this the "what is beautiful is good" attribution. Others have also found support for this common stereotype (Ashmore & Longo, 1995; Calvert, 1988). Meta-analyses have demonstrated the common belief that attractive people have higher levels of social competence, are more extraverted, happier, more assertive, and more sexual (Eagly, Ashmore, Makhijani, & Longo, 1991, Feingold, 1991).

Even young children at a very early age have an awareness of who is and is not attractive. Commonly accepted stereotypes attribute many positive traits and behaviors to the physically attractive. In several experiments the participants were asked to rate a variety of photographs varying in attractiveness (Bar-Tel & Saxe, 1976; Eagly, Ashmore, Makhijani, & Longo, 1991; Feingold, 1992b). Persons rated attractive were perceived to be happier, more intelligent, as having more socio-economic success, and possessing desirable personality traits. This undeserved stereotype is consistent across cultures but varies according to cultural values.

For women more than for men, physical attractiveness is a door opener. Just a look at women's journals, and the obsessive concern with beauty and weight suggests a differential advantage accrues to attractive women. This affects not only personal interactions, but also treatment on the job (Bar-Tal & Saxe, 1976). Over the centuries, physical attractiveness for women was tied to their survival, and social success. It is no wonder then that these historical facts have created a much stronger preoccupation with attractiveness for women (Fredrickson & Roberts (1997).

Some studies show that even from birth babies differ in their relative attractiveness. Mothers provide more affection and play more with their

attractive infants than with those babies deemed less attractive (Langois, Ritter, Casey, & Sawin, 1995), and nursery school teachers see them as more intelligent (Martinek, 1981). Many rewards accrue to those deemed attractive in our society. While still infants the attractive child is more popular with other children (Dion & Berscheid, 1974). So very early in life the attractive child is given many benefits, including the perception that he/she posses many positive traits and behaviors (Dion, 1972).

There must be a biological basis when, even before interaction or experience, infants themselves show strong preferences for attractive faces (Langlois, Roggman, Casey, Ritter, Rieser-Danner, & Jenkins, 1987;Langlois, Ritter, Roggman, & Vaughn, 1991). Infant preferences for attractive faces held true for both adults as well as for the faces of other infants. Even when presented to strangers, the infants showed preference for the attractive face, and were more content to play and interact with the attractive stranger. On the other hand they turned away three times as often from the stranger deemed unattractive as from the one rated attractive (Langlois, Roggman, & Rieser-Danner, 1990).

Being given such great advantages at birth, it is no wonder that a person's relative attractiveness has an effect on development and self-confidence. The physically attractive do in fact display more contentment and satisfaction with life, and feel more in control of their fates (Diener, Wolsic, & Fujita, 1995; Umberson & Hughes, 1987). Being treated so nice from birth onward produces the confidence and traits that encourage further positive interactions and rewards (Langlois et al, 2000). Other people by their positive regards create a self-fulfilling prophecy as the attractive person responds with the expected socially skillful behavior.

5.7 The universality of the "beautiful is good" attribution

Is the stereotype present in various cultures? Research would tend to support this contention (Albright, Malloy, Dong, Kenny, Fang, Winquist, & Yu, 1997; Chen, Shaffer, & Wu, 1997; Wheeler & Kim, 1997). Although beauty is a door opener in all cultures, each culture may vary as to what traits are considered desirable. Some traits associated with attractiveness like being strong and assertive are especially valued in North American samples. Other traits such as being sensitive, honest, and generous are valued in Korean cultures. Some traits like happy, poised, extraverted, and sexually warm and responsive are liked in all the cultures studied.

5.8 Physical attractiveness has immediate impact and provides vicarious prestige

Experimental research shows that vicarious prestige is derived from association with an attractive person (Sigall & Landy, 1973). In one study the participant's impression of an experimental confederate was influenced by whether the collaborator was seated with an attractive or unattractive woman. When with an attractive woman the confederate was perceived as both likeable and confident. There are predictable gender differences. Being with an attractive woman has more positive consequences for a man, than being with an attractive man has for a woman (Bar-Tal & Saxe, 1976; Hebl & Mannix, 2003). US society has coined the term "trophy wife" to demonstrate the appreciation of a man, usually wealthy, being with a young and attractive spouse.

5.9 Cultural differences and consistencies in physical attractiveness: Reproductive health

There are some variations among cultures as to what is considered attractive. Western society has changed over time in evaluation of female beauty. Like mentioned before, just a short historical time ago voluptuous women were considered attractive whereas today the skinny woman is considered more alluring. In different cultures there is also different preferences for skin color and ornaments (Hebl & Heatherton, 1997). In the China of the past, artificially bound small feet of women were thought sexually stimulating and in other cultures women lengthened their necks by adding rings and stretching that body part. So there are cultural variations in what is considered beautiful and attractive. However, there is also considerable cross-cultural agreement on what is physically attractive as there are features of the human face and body that have universal appeal (Langlois et al, 2000; Rhodes, Yoshikawa, Clark, Lee, McKay, & Akamatsu, 2001). Asians, Blacks and Caucasians share common opinions about what are considered attractive facial features (Bernstein, Lin, McClennan, 1982; Perrett, May, & Yoshikawa, 1994).

As discussed previously, even infants have a preference for attractive faces. The appreciation of beauty must derive from something very functional to our survival and hence to reproduction. Physical attractiveness most importantly signifies good health, and reproductive fitness. Keep in mind that those traits that are functional to our survival are also preserved in biology and our genes. If our ancestors had been attracted to unhealthy persons, they would not have had any offspring. Nature informs us by physical attractiveness that the proposed partner

possesses good reproductive health.

We are attracted to faces that typify the norm, and stay away from those that are anomalous. Langlois & Roggman, (1990) in fact, found evidence for the preference for the face scored by independent judges to be culturally typical or average. By means of computer technology, they managed to make composite faces of a number of persons (or average faces), and found that these were considered more attractive than different individual faces. Having average features is one component of beauty. Others have, however, shown that there are also other features (higher cheek bones, thinner jaw, and larger eyes) that contribute to attractiveness (Perett, May, & Yoshikawa, 2994).

Bilateral symmetryis a significant feature in physical attraction (Thornhill & Gangestad, 1993). Departures from bilateral symmetry may indicate the presence of disease, or the inability to resist disease. Average features and symmetry are attractive, from the evolutionary perspective, conceivably because they signal good health to a prospective mate. These cues exist at such a basic level that we have no conscious awareness of their presence. We just know what is attractive to us, and approach the other person depending on that quality, and our own level of attractiveness.

5.10 Attraction variables and first encounters

If we ask people to recall relationships of the past, what do they volunteer as being the cause of initial attraction? In one study, the participants were asked to describe how they had fallen in love or formed a friendship describing a specific relationship from the past (Aron, Dutton, Aron, & Iverson, 1989). These accounts were then categorized for the presence or absence of the attraction variables. For those describing falling in love, reciprocal liking and attractiveness were mentioned with high frequency. To start a relationship many of us just wait to see if an attractive person makes a move that we can interpret as liking. Reciprocal liking and attractiveness in several meanings are also associated with the formation of friendships. Although this holds true for both genders, conversation appears as one additional important quality for females. Women find quality conversation of greater importance than do men in friendship attraction (Duck, 1994a; Fehr, 1996).

Similarity and proximity, on the other hand, were mentioned with lower frequency. Perhaps these variables seem obvious and therefore do not become

part of our memory or consciousness. Similarity and proximity may still play very important roles in interpersonal attraction. They respectively focus attention on those deemed eligible and of interest, and on opportunities for encounters. Similar reports emphasizing the importance of the attraction variables, reciprocal liking, attractiveness, similarity, and proximity, have been obtained from memory reports of initial encounters in other cultures as well (Aron & Rodriquez, 1992; Sprecher, Aron, Hatfield, Cortese, Potapova, & Levitskaya, 1994).

5.11 Level of attractiveness

Water finds its own level, and that seems to hold true for relationships. People seek out mates at the approximate same level of attractiveness they possess (Murstein, 1986). We tend to pair off with people who are rated similar in attractiveness whether for dating or for long-term relationships (Feingold, 1988). Similarity in physical attractiveness affects relationship satisfaction (White, 1980). Those similar in physical attractiveness fall in love.

What is an equitable match in the market place of relationships? If one partner is less attractive perhaps he has compensating qualities like being rich. The dating market is a social market place where potential friends or mates sell compensating qualities. Consistent with the previous discussion, men offer social status and seek attractiveness (Koestner & Wheeler, 1988). Since the market place dominates our psychology perhaps that explains also why beautiful women seek compensation if they are to consider a less attractive man. Beautiful women tend to marry higher in social status (Elder, 1969). In the long run market place psychology may also be responsible for our incredible divorce rates. If the exchange of relationship qualities is not satisfactory why not just look for something better? When relationships are based on exchange, and qualities like physical attractiveness deteriorate over the lifespan, no wonder that many become dissatisfied and consider their alternatives.

6. Theories of Interpersonal attraction

In some societies the market place seems to determine all aspects of culture and interpersonal interactions. It is no wonder then that theories of interpersonal attraction emphasize qualities important in the market place: rewards, costs, alternatives, and fairness. All relationships involve interdependence and we have the power to influence outcomes and satisfaction. In chapter1 we briefly discussed the following theories. Now it is time to see their application to interpersonal attraction.

6.1 Social exchange theory

The attraction variables we have discussed all contain potential rewards. Why is it rewarding to be with people who are similar? Similar people validate our self-concept, and that is experienced as rewarding. What are the rewarding aspects of propinquity? If a potential friend lives next door, we do not have to make much of an effort to meet him or her, and that is experienced as rewarding. Is physical attractiveness rewarding? Physical attractiveness brings status to the partner, and that is rewarding. What about reciprocal liking? That can be experienced as validating our self-concept and our sense of worthiness. So many of the variables we have discussed previously can be interpreted by a theory that has rewards and costs as a basis, one such theory is social exchange theory (Homans, 1961; Kelley & Thibaut, 1978; Secord & Backman, 1964; Thibaut & Kelley, 1959).

According to the economic perspective of social exchange theory people feel positive or negative toward their relationships depending on costs and benefits. All relationships involve rewards as well as costs, and relationship outcomes are defined as the rewards minus the costs. The partner may bring comfort, sexual excitement, support in bad times, someone to share information, someone to learn from, all possible rewards. However, the partnership also has costs. The partner might be arrogant, a poor provider, unfaithful, and have different values. These are the potential costs. Social exchange theory proposes that we calculate these rewards and costs consciously or at the subliminal level. If the outcome is positive, we are satisfied and stay in the relationship; if not, we bring the relationship to an end (Foa & Foa, 1974; Lott& Lott, 1974).

Relationship satisfaction in social exchange theory depends on one additional variable: our comparison level. What do you expect to be the outcome of your current relationship based on your past experiences in other relationships? If you were married to a fantastic man who died you will always have high expectations when meeting potential new partners. On the other hand, at work you have experienced successive poor managers. In transferring to a new department you are pleasantly surprised by an ordinary supervisor, as all your previous work relationships have been negative. Social exchange theory asserts that what we expect from current relationships is laid down in the history of our relationships. Some of us have had successful and rewarding friendships and therefore have high comparison levels. Others have experienced much disappointment and therefore have low expectations. Your satisfaction therefore depends on the

comparison level developed from experience.

However, you may also evaluate the relationship from the perspective of what is possible. Perhaps you have friends that have rewarding relationships or rich partners. This provides you with another level of comparison, namely a comparison level of alternatives. If you ditched this partner and started circulating again, you might meet mister right who is rich, attractive and supportive. After all it is a big world so there is a probability that another relationship will prove more rewarding.

Some people have high comparison levels; they have had good fortune in past relationships. Their comparison level for an alternative relationship may therefore be very high, and not easy to meet. Others have low comparison levels for alternatives and will stay in a costly relationship, as they have no expectation that other attachments will provide better results. Women in abusive relationships, for example, often stay because they do not believe that other relationships will improve life (Simpson, 1987).

6.2 Equity theory: Our expectation of fairness

According to equity theory, we feel content in a relationship when what we offer is proportionate to what we receive. Happiness in relationships comes from a balance between inputs and rewards, so we are content when our social relationships are perceived to be equitable. On the other hand, our sense of fairness is disturbed when we are exploited and others take advantage of us. We all possess intuitive rules for determining whether we are being treated fairly (Clark & Chrisman, 1994). Workers who are paid very little while working very hard feel the unfairness or imbalance between input and reward, especially when others benefit from their hard work. These feelings of injustice constituted the original motivation of the workers movement, the trade unions, and the workers political parties.

At dinnertime do all the children get the same size piece of pie, do we distribute the food in an equitable manner? Equality is the main determinant of our evaluation of the outcome among friends and in family interactions (Austin, 1980). There are of course times when one child’s needs are greater than another sibling. Many will recognize that families respond to that issue with “from each according to his ability to each according to his need”. One child might be very sick and need all the family’s resources. The idea that benefits should be

distributed according to need is another aspect of fairness (Clark, Graham, & Grote, 2002).

Equity theory asserts furthermore that people's benefits should equal their input. If we work harder than others we should receive a larger salary (Hatfield, Traupmann, Sprecher, Utne, & Hay, 1985). When people perceive unfairness or inequity they will try to restore the balance. For example, if you work for a low wage you may get together with others who are unfairly treated as well and seek more compensation. You may also cognitively adjust by reasoning that there are no alternatives, and that you are lucky to have any income at all. Then you can use cognitive strategies to change your perception of unfairness. If neither of the strategies bring satisfaction, then it is time to quit and look for some other career.

In intimate relationships satisfaction is also determined to some degree by equity (Sprecher, 2001). For example, how to distribute the household work fairly is an important issue for many young couples. Those couples that cannot find an equitable balance report more distress (Grote & Clark, 2001). Gender ideology plays a role in relationship satisfaction. Feminist ideology historically reacted to the great unfairness brought on by discrimination toward women at home and at work. Feminist women may therefore be unhappier if they perceive inequity in household work (Van Yperen & Buunk, 1991).

6.3 Equity and power

Partners may prefer different solutions to daily equity problems. Should the resources of the family go toward the husband's education, or to buying a house? In a world of scarce resources there are always decisions that may favor only one party. The power balance decides to what degree either partner in an intimate relationship can influence the feelings, thoughts and behaviors of the other partner. Are all decisions made mutually? How do partners come to an agreement about what type of decision-making is fair and equitable?

What determines power in a relationship? Social norms about gender behavior are a powerful determinant. Traditionally women were taught to respect the dominant role of men as "head" of the family. The man historically had total control over wife and children. Today similar traditional patterns continue throughout the world. There is even the very famous case of a princess in the Saudi Arabian royal family who was executed by orders of her grandfather. Her offense was having a relationship based on romance rather than accepting her

father's decision for an arranged marriage. These so-called honor killings, when women are murdered to restore family "honor", follow a similar pattern of absolute male control. In the western world these traditional gender roles are giving way to more equitable relations in society and in the family.

Partners may have different resources. When the man has resource advantages, he also tends to be more dominant. When the wife earns at least 50 percent of the household income, there is more equitable power sharing. Power is also partly based on the feelings of dependency within the relationship (Waller, 1938). When one partner is more dependent, the other has more power. This holds also for psychological dependency. If one partner has a greater interest in maintaining the relationship than the other, the dependency gives more power to the partner.

So there are variations in how power works out in relationships. In some relationships the man is totally dominant, and some cultures support this sex role resolution. However, we have observed many changes in gender roles and relations over the past decades. Women have gained more social power and more equity in intimate relationships. In one US survey of married couples the majority (64%) claimed equality in power relations (Blumstein & Schawartz, 1983). A large number (27%) reported that the man was dominant, and 9 percent that the wife controlled power in the marriage. In a more recent US study (Felmlee, 1994) 48 percent of the women and 42 percent of the men described their relationship as equal in power, with most of the remaining respondents reporting that the man was dominant. Couples can achieve equality in different ways with a division of responsibilities. Depending on the situation one of the parties may have more power, but overall there is a sense of equality. Some studies find that consensus between a couple is more important than negotiating all the fine details of power sharing, and relationship satisfaction appears equally high in male dominated as in power sharing relationships (Peplau, 1984). In close relationships there is less need to negotiate everything and produce equitable solutions. If the satisfaction level is high, the parties are less concerned with perfect equity. It is whether the relationship is rewarding that counts (Berscheid & Reis, 1998).

7. Exchange among strangers and in close communal relationships

Exchange relationships also exist between strangers or in functional relationships at work. Exchange relationships tend to be more temporary and the partners feel less responsibility toward one another compared to more intimate relationships. Satisfaction in all exchange relationships is as noted determined by the principle

of fairness. Did your professor give you a grade that reflected your work? Work related outcomes and satisfactions are determined by application of the fairness principle.

In communal relationships, such as families, on the other hand, people's outcome depends on their need. In family relationships we give what we can, and receive from the family what it is able to provide. Communal relationships are typically long-lasting, and promote feelings of mutual responsibility (Clark & Mills, 1979). We look after our children not because we expect a reward, but rather to respond to the needs of our dependants. Likewise children look after their infirm parents, because of feelings of responsibility. In intimate relationships partners respond to the needs of the other, without expecting to be paid back in exact coin or immediately. There may be rewards for both parties in the long run. In short, exchange theory better predicts behavior in relationships where the parties are preoccupied with inputs and rewards, whereas in communal relations the partners are more concerned with meeting the needs of the relationship (Clark, Mills, Powell, 1986).

Mills and Clark (1994; 2001) have defined further differences between exchange in different types of relationships. Among strangers you are not likely to discuss emotional topics whereas that is expected in communal interactions. In communal relationships helping behavior is expected, whereas it would be seen as altruistic in relations between strangers. Moreover, a person is perceived as more selfish if failing to help a friend, than if he failed to come to the aid of a stranger. In real intimate relations between lovers the lines between partners is blurred as a feeling of "we" pervades. When we benefit a loved one, we feel like we are benefiting ourselves (Aron & Aron, 2000). The beloved is seen as part of the self, and terms like "we" is used more frequently than "I" as relations move beyond exchange and equity concerns (Agnew, Van Lange, Rusbolt, & Langston, 1998).

7.1 Culture and social exchange

Cultural differences affect relationships. In Western society some of our relationships reflect market economic values such as exchange and some forms of equity. Asian societies have in the past been based on more traditional, communal standards. Economic companies in Asia often take a paternal role, offering life long job security. How are the new market economies affecting psychology in Asia and Eastern Europe? Assuming a relationship between economic relations and psychology, we might expect a greater shift toward social exchange relations.

Social exchange theory also plays a role in intimate relationships in a variety of cultures (Lin & Rusbult, 1995; Rusbult & Van Lange, 1996; Van Lange, Rusbolt, Drigotas, Arriaga, Witcher, & Cox, 1997). Although communal relations are more characteristic of interdependent cultures, there is still a role for social exchange for some relationships in these societies as well as in more independent cultures.

7.2 Evaluation of relationship satisfaction

How committed people are to a relationship depends on satisfaction, on the potential alternatives available, and on the investment made (Rusbult, 1983). If we are not satisfied in a relationship there are alternatives to be explored. Before we end the relationship we carefully assess one particular factor. Namely, how much have I invested in the relationship? How much would I lose if I left the relationship? Would I be better or worse off, many women in abusive relationships ask themselves. Investment is also a factor the individual considers prior to the commitment to dissolve of a relationship. Investment comprises several things: the money available for a new life, a house that might be lost, the emotional well being of children in the relationship, and of course all the work that has been invested in the relationship. This model also predicts commitment in destructive relationships (Rusbult & Martz, 1995). Women who had poorer economic prospects, and were strongly invested with children present, were more likely to tolerate some forms of abuse.

It is difficult to evaluate equitable outcomes as partners trade different resources. Equity however, remains a factor even in intimate relationships (Canary & Stafford, 2001). In intimate relationships there are few rigid give and take rules. Perhaps the wife does all the housework, does most of the child rising, and is a romantic partner while the husband is only a student. It may seem unfair, but the investment may pay off down the line in higher income and status. In intimate relationships partners have the long view in mind when evaluating equity. The partners trust that eventually everything will work out to the benefit of the whole family unit.

7.3 Self-disclosure: building intimate relationships

Self-disclosure is the bridge to intimacy and liking (Collins & Miller, 1994). When we disclose important information to others we become vulnerable, and so self-disclosure is a form of trust that invites reciprocation. People who self-disclose are therefore seen as trusting people, and trust is an essential component in intimate relationships. When we open ourselves up to another, reciprocation

tends to occur (Dindia, 2002). Telling someone something significant is an investment in trust, and if the relationship is to move to another level, a gradual process of reciprocation is required. Reciprocal self-disclosure is a key factor in liking and builds bridges to the deeper and more meaningful part of a person's inner self (Chaikin & Derlega, 1974).

There are of course risks involved in self-disclosure. The other person may not be interested and fail to reciprocate. We may also reveal something about ourselves that offends the values of the other person thereby causing rejection. Having revealed significant information, we have made ourselves vulnerable to the other person's ability to manipulate or betray our confidence. Many prisoners have after the fact found it unwise that they confessed their crimes to cell mates who later sold the information. For these and other reasons we are often cautious in self-disclosure and will conceal inner feelings (Finkenauer & Hazam, 2000).

In individualist cultures relationship satisfaction is related to self-disclosure. In the more collectivist cultures social relations are often more inhibited (Barnlund, 1989). Japanese students were found to self-disclose much less than American students. Self-disclosure is important to love-based marriages in both American and Indian societies (Yelsma & Athappilly, 1988). However for Indian couples in arranged marriages, marital satisfaction was independent of self-disclosure. Perhaps in these formal relationships satisfaction depends more on completion of agreements and contractual expectations.

Cultural norms determine to a large extent the pattern of self-disclosure across many societies. In western culture emotional expression is normative for women and therefore acceptable. The emphasis on rugged individualism for men suggests that our society suppresses intimacy among men. Hence emotional expression by men is generally directed toward females. In Muslim countries and some societies in Asia, same sex intimacy is encouraged (Reis & Wheeler, 1991).

*7.4 Gender **differences in self-disclosure?***

A meta-analysis of hundreds of studies showed that women disclose significantly more than men (Dindia & Allen, 1992). Although the overall differences were not large they were statistically significant. Within same sex friendships, women reveal more of themselves than men who are more cautious with their male friends. Verbal communication appears especially important to women, whereas men cement their relationships with best friends through shared activities

(Caldwell & Peplau, 1992). Women also seem more willing to share their weaknesses, whereas men will disclose their strengths. The sexes also differ in revealing gender specific information. Men like to share their risk-taking behavior, for example their last mountain climbing trip, or when they saved someone from drowning. Women are more likely to share concerns about their appearance (Derlega, Durham, Gockel, & Sholis, 1981). Social psychology is history so perhaps things have changed since the time of this study.

8. Romantic and loving intimacy

Reciprocal liking is the first step on the road to romance and intimacy. Some basic components are common to all love relationships, whether romantic or friendship. Hallmarks of these loving relationships include valuing the partner, showing mutual support, and experiencing mutual enjoyment (Davis, 1985). Romantic love differs from friendship or parental love by its sexual interest, by fascination with the beloved, and by expectation of exclusiveness of affection. Passionate love is deeply emotional and exciting. It is the pervading and overwhelming desire for a union with the beloved (Hatfield, 1988). When reciprocated passionate love brings with it feelings of joy and fulfillment, all life can be managed with such a relationship secured. When the partners are insecure however, passionate love can also bring jealousy and pain (Kenrick & Cialdini, 1977).

8.1 Physiological arousal or emotion of love?

We can feel intense emotional excitement in a variety of situations. The physiological reactions are similar whether you are mountain climbing or being aroused by being physically close to your beloved. The attributions we make are what make some emotions romantic. Anything that arouses us physiologically can also create romantic feelings and more intense attractions (Dutton & Aron, 1989). From their classic experiment in which an attractive young lady approached young men as they crossed on a long suspension bridge high above the river (described in chapter 2) it would appear that the physical arousal produced by the high bridge (probably fear) increased the men’s romantic responses.

Are there gender differences in experiencing romantic love? Some findings indicate that men are more likely to fall in love, and are less likely to fall out of love, or break up a premarital relationship (Peplau & Gordon, 1985). Since the experience of love is different from promiscuity this finding is not a contradiction of the male tendency in that direction. Perhaps men are more deprived of

intimacy and feel the greater need?

8.2 Intimacy and love

Many people in our world long to experience the feelings of intimacy and love with another person. What is intimacy and love? We may know how it feels, yet find it difficult to understand. Loneliness comes from being disconnected from others, and from feeling misunderstood or unappreciated. Intimacy is the reverse of that coin. Intimacy is that lovely moment when someone understands and validates us (Reis, Clark, & Holmes, 2004; Reis & Shaver, 1988). We feel intimate when our partner responds and extends to us unconditional positive regard. Intimacy is felt when despite our shortcomings our partner extends full support, and when we can truly "count on the other person" being steadfast despite the trials of life.

Initially intimacy may manifest itself as a giddy feeling of joy. We feel the fascination or infatuation, but do not always understand the experience at any rational level. The process begins by sharing important feelings either verbally or non-verbally. The partner reciprocates and conveys a feeling of understanding and support (Berscheid & Reis, 1998). Communication is the key to intimacy, the more partners engage in meaningful conversation the more intimacy is experienced (Reis, Sheldon, Gable, Roscoe, & Ryan, 2000). Sharing deep feelings of love and having these feelings reciprocated is the bridge over the still waters of love (Mackey, Diemer, & O'Brien, 2000).

Men and women experience intimacy in similar ways (Burleson, 2003). We all attach value and meaning to our intimate relationships. Women, however, tend to express more readily the emotions leading to intimacy (Aries, 1996). Women also tend to be more intimate in same sex relationships than men, and place a higher value on intimate relations. Our socialization allows women greater emotional expressiveness, and they become more skilled emotional communicators compared to men. One source of relationship dissatisfaction is the discrepancy between the genders in the desire for intimate interactions.

Romantic relationship brings intimacy to a logical conclusion. When two people fall in love, trust each other, and communicate at a meaningful level of intimacy, sexual relations becomes one more expression of love. Intimacy leads to passion, and if lucky also to commitment (Sternberg, 1986). Intimacy combined with passion is romantic love. In long lasting relationships the passion may fade away.

When that occurs intimacy may combine with commitment and form companionate love, or intimacy without sexual arousal.

For those who have long futures together, intimacy, passion, and commitment form what Sternberg calls consummate love, the basis of a life long relationship. The longer a relationship survives the trials of life, the more likely it is to move toward companionate love. Companionate love is based on deep feelings of affectionate attachment derived from mutual history and shared values (Carlson & Hatfield, 1992). Many couples feel disillusionment when the romantic phase moves to the next step in life. The inability to keep the romantic flame alive contributes to loss of affection and our high divorce rate. People in the US tend to focus on the personal feelings of romance, a luxury of a wealthy society. People in Asia are more concerned with the practical aspects of living together (Dion & Dion, 1991; 1993). Passionate love brings children, but to raise them requires companionate love and not mutual obsession. Companionate love is just as real as the initial passion, and is essential for the survival of families and the species.

Most people experience romantic relationships at some point in their lives. Some will say that these relationships are essential to our sense of well-being (Myers, 2000a, Myers, 2000b). Successful romantic relations contribute to life satisfaction, and to our overall condition of health (Berscheid & Reis, 1998). However, not all romantic relationships are successful. As noted earlier about 50 percent of all marriages in the western world end in divorce, perhaps half of those that remain are unhappy. We need to understand what causes such profound disillusionment (Fincham, 2003).

8.3 Disillusionment and divorce

Many relationships become bankrupt and one or both parties decide to split (Myers, 2000a, Thernstrom, 2003). There are some who feel that if the trend continues eventually two-thirds of all marriages and partnerships will end in divorce (Spanier, 1992). And what of the surviving marriages? We cannot assume that they continue because the parties are happy in their relationship! Some unhappy relationships continue for reasons of dependency or moral requirements. The divorce statistics are a tragic commentary about our inability to adjust to changing sex roles in modern society. Divorce becomes an option for many couples in modern society as women feel less economically dependent on men, and feel they have alternatives.

Many studies indicate that marriages produce less contentment than they did 30 years ago (Glenn, 1991). Conflict in marriages has caused many negative health consequences, for example cardiac illness, and negative effects on the immune system (Kiecolt-Glaser, Malarkey, Cacioppo, & Glaser, 1994). There are always victims in divorce. Children of divorced parents experience many negative outcomes in childhood as well as later in life (Wallerstein, Lewis, & Blakeslee, 2000). Ending a romantic relationship produces extreme disillusionment in couples, and ranks among life's most stressful experiences.

8.4 The role of social exchange and stressful negotiations

Why do relationships fail? We live in a world dominated by preoccupations about what is fair in relationships, is it a wonder that couples tire of the constant negotiations? Social exchange theory has helped researchers identify both destructive and constructive behaviors affecting divorce (Rusbult, 1987; Rusbult & Zembrodt, 1983). Contributing to divorce occurs when one party abuses his/her partner and threatens to leave the marriage. Other couples allow the relationship to slowly deteriorate by passively retreating and refusing to deal with issues. When both parties exhibit these destructive patterns, divorce is the typical outcome (Rusbult, Yovetich, & Verne, 1996).

8.5 Fatal attractions

One cause for divorce is what is called "fatal attractions" (Femlee, 1995). Often the qualities that first attract one to another end up being the quality most disliked. The outgoing individual attracts the shy person. However, after enduring constant social activity the shy person feels that enough is enough. Fatal attractions occur when someone is significantly different from the other person. The immature person is attracted to someone much older. Later in the marriage when the older person is not interested in youthful activities, the age difference becomes the cause for conflict (Femlee, 1998). These findings again point to the importance of similarity in the relationship which functions not just to produces initial attraction, but also long-term contentment. Some initial attractions of the socially gifted lead to negative outcomes also labeled "fatal attractions" (Felmlee, Flynn, & Bahr, 2004). An initial attraction to a partner's competence and drive for example, was later in the relationship perceived as alienating and as demonstrating workaholic attitudes that were destructive to the relationship. Some respondents who were initially attracted to a partner's intelligence later were repelled by what they considered a considerable ego.

8.6 Personality differences and demography

Other research has focused on the personality of those who divorce. People who come into a relationship with negative baggage from other relationships are more likely to split. Those who are neurotic, anxious, and emotionally volatile are divorce prone (Karney & Bradbury, 1997; Kurdek, 1992). Neurotics spend much time feeling negative emotions that negatively impacts the partner and the marriage. They are also more likely to bring other types of stress to the relationship including health issues and problems (Watson & Pennebaker, 1989). Neurotic people react strongly to interpersonal conflict and therefore are less satisfied in relationships (Bolger & Schilling, 1991). If a person is overly sensitive, he or she is more likely to look for rejection and have greater difficulties in establishing or continuing intimate relationships (Downey & Feldman, 1996;Downey, Freitas, Michaelis, & Khouri, 1998).

8.7 Demographic variables and divorce

Some demographic factors are related to dissatisfaction. Generally those who have lower socioeconomic status are more likely to end marriages (Williams & Collins, 1995). Lower socioeconomic status brings stress into a marriage, including money worries and job insecurity. Marrying at a young age is related to lower socioeconomic resources (Berscheid & Reis, 1998). Sometimes the very young do not have the education needed to succeed in an increasingly competitive world. If they have no other resources they often depend on minimum wage jobs, in a constant struggle to keep their heads above water. In the US young married couples often have no insurance, poor housing, and few prospects for improvement, but this situation is different in Western Europe. Young couples often lack the maturity to cope, and a willingness to put the interests of the other person first.

8.8 Conflict in intimate relationships

Most people do not care what mere acquaintances think of their preferences in life. Whatever acquaintances believe will have few consequences either good or bad. However, those people who are close to us can have profound effects on our goal attainment and our happiness. The frequency of interaction with intimate friends or family produces more opportunities for conflict. For example, a teenager wants to attend a party, but his parents want him to study. In intimate relationships we feel the stresses of life, and often latch out at those we should love and protect. The birth of a new child is experienced as stress by most

couples, as is death in the family or other significant loss (Bradbury, Rogge, & Lawrence, 2001) but these types of stress usually does not lead to conflicts.

Most marriages experience at least occasional unpleasant disagreements (McGonagle, Kesler, & Schilling, 1992). No marriage or partnership is perfect, all relationships reflect varying interests and preferences. As couples become more interdependent, and do more things together, opportunities for conflict increase (McGonagle, Kessler, & Schilling, 1992). Intimate partners fight over a variety of issues from political and religious disagreements, to household responsibilities (Fincham, 2003).

Conflict occurs when we interfere with someone's preferences, and frustrate goal attainment. One partner thinks it is important to save for a house or children's education. The other partner wants to enjoy life now and use the money for travel. Compromises can often be found, but at times conflicting goals add to tension and disillusionment in the relationship.

Some conflicts are caused by the behaviors of the partner. Drinking to excess or using drugs are causes for conflict. Since we live in a changing world, we may also differ in our perceptions of our responsibilities and privileges in the relationship. A tradition minded man may see household chores as "woman's work", whereas an egalitarian woman may have expectations of an equal division of such tasks. Finally, conflict may also be caused by the attributions we make of the partner's behavior. Do we give the partner the benefit of the doubt, or do we attribute her/his behavior to bad intent? If the partner has difficulty in finding rewarding work do we attribute that to an unpromising work situation and general unemployment, or do we believe the partner is indifferent and lazy?

These three levels of conflict – level of integration, interference and behavior – reflect the three ways that partners are interdependent. At the behavioral level, partners may have different expectations. At the normative level the partners believe in different rules (egalitarian or traditional) for their relationship. Conflict is likely if the wife has an egalitarian perspective, but the husband is traditionally minded. At the dispositional level, conflict may be a result of the partner's disagreement over attributions for the conflictive behavior (Braiker & Kelley, 1979). Most conflicts have the potential to be harmful to marriages, but some relationships can be helped by an open discussion of disagreements and recognition of the possibility for change (Holman & Jarvis, 2003).

Conflict may also occur as a result of the blaming game. Attributions of blame are especially toxic to a relationship (Bradbury & Fincham, 1990). Dissatisfied couples blame each other for problems in the relationship. Blaming is another way of attributing negative causes to the partner's behavior. Even when the partner performs a positive act the partner may attribute it to bad intentions. Gifts of flowers may for example not be considered an act of love by the blaming partner, but as designed to serve some ulterior purpose. Dissatisfied couples make attributions that consistently cast the partner's behavior in a negative light (McNulty & Karney, 2001).

8.9 The interpersonal dynamics of unhappy couples

Studies of married partners have pointed to some significant dynamics that are powerful predictors of divorce (Levenson & Gottman 1983; Gottman & Levenson, 1992). The researchers got married couples to talk about a significant conflict in their lives and then subsequently coded the interaction for negative responses. Based on these observations the researchers identified four types of behaviors that could predict with 93 percent accuracy whether the couple would divorce (Gottman & Levenson, 2000).

The four toxic behaviors include criticism (1). Those who consistently find fault with their partners will have unhappy marriages. The tone of the criticism (2) also makes a difference. Some partners criticize in ways that belittle the other person. Others know how to criticize in a lighthearted or playful way, and the outcome can then be positive (Keltner, Young, Heerey, Oemig, & Monarch, 1998). To solve problems in a relationship requires the ability to talk openly, and without eliciting defensiveness in the partner. Some people are so neurotic that even the slightest criticism elicits anxiety and rejection. Another dysfunctional way of dealing with conflict is to stonewall the issue (3), deny the existence of any problems, or convey the impression that the problem is unworthy of serious discussion. Conflict denial is also related to the final toxic behavior, the emotion of contempt (4). When a partner consistently looks down on the other person as inferior and expresses feelings of superiority that contempt is the ultimate expression of disillusionment and highly predictive of divorce (Gottman & Levenson, 1999).

8.10 The market economy and divorce in China

Chinese society now exhibits similar marital problems to those of long established market economies. Nationwide the divorce rate has skyrocketed 67 percent between 2000 and 2005, and is still increasing (Beech, 2006). It would appear

that psychological concepts derived from the market economy have entered marital relations in China with similar consequences to those in western capitalist nations. However, this development might also been explained by an emerging courage by women to break away from traditions and demand justice and an equal say in a relationship. New terms such as “flash divorce” have emerged as it is now possible to get divorced in China in as little as 15 minutes. The divorce rate is mainly due to women’s dissatisfaction with the unfaithfulness of men. Women themselves now have more economic power and do not have to put up with relationships that doomed the happiness of their mothers and grandmothers. Economic independence has increased women’s expectations from their relationships and, when not met, disillusionment has led to dissatisfaction. The material underpinnings of this revolution are indicated by female requirements for marriage in Shanghai that now include the necessity of the man owning a car, a nice apartment, and a considerable bank account. There are those who say, “materialism is being pursued at the expense of traditional values like love” (Beach, 2006: 52). Couples have become more skeptical or cynical about the marriage relationship. According to Beach there were 441,000 fewer marriages in 2005 compared to the previous year. The difference in valuing marriage between individualistic and collectivistic cultures is broken down by the relentless march of market economy psychology resulting from globalization (Dion & Dion, 1993; Dion & Dion, 1996).

8.11 The emotional consequences of ending a relationship

A key factor in how people react to a breakup of a relationship is the role each person played in the decision (Akert, 1998). The research showed that the person who decided the breakup coped the best. The partner who decided to split generally found the ending of the relationship less sad, although even in that case there were some negative consequences reported, including higher frequency of headaches. The party who was least responsible for the decision reported more unhappiness and anger. All partners in a breakup situation reported some physical reactions within weeks. The break of deep emotional ties is extremely stressful.

The least negative consequences occur when the couple allow for mutual decision-making. It reduces somewhat the negative symptoms reported, although 60 percent still reported some negative reactions, with women suffering the most (or perhaps being more honest in reporting). Can people stay friends after a

romantic breakup? It depends on gender. Men are usually not interested in continuing a relationship on a friendship basis, whereas women are more interested. Again what seems to be a key is whether the breakup is based on a mutual decision; in that case there are stronger possibilities for a continued friendship.

8.12 Forming satisfying and lasting relationships

How can we create relationships that result in happy outcomes? From the perspective of exchange theory, the focus must be on more profit in the relationship. We can increase profit by either reducing the costs of interaction, or increasing rewards to each partner (Rusbult, 1983). The more rewarding a relationship as defined by the individual the more satisfactionit produces. What constitute costs is less well understood. When the wife puts a husband through college while raising their children is that a cost or a sacrifice for a happier future (Clark & Grote, 1998)? In intimate and close relationships costs are simply the willingness to put aside egoistic interest for the sake of the relationship. As noted earlier sacrifice may be perceived as being rewarding in the long-term vision of the future life of the couple.

Since we live in market economies which encourages social comparison and affects our psychology, many partners are tempted to look at the outcomes for other couples as well as their own expectations of satisfaction when evaluating their relationship. A key to happiness is to meet the expectations we had when we married. We can always find those that are doing less well that we are on a variety of criteria. One party may not be happy with the level of emotional intimacy in the relationship, but can point to the neighbor with an alcoholic spouse as a comparison standard (Buunk, Oldersma, & De Dreu, 2001). The satisfaction of downward comparison can be seen in the popularity of the yellow press and the scandal newspapers. Many people enjoy reading about the misfortune of the rich and famous because it makes them feel better about their own less than perfect lives.

Equity theory may also play a role in evaluating satisfaction in relationships. A balanced relationship where each partner contributes a fair share is more satisfying and happy (Cate & Lloyd, 1992). Fairness is always at the perceptual level, and so our evaluation of fairness depends on the quality of the relationship. If the partners are happy, the occasional inequity in contributions will be seen as a minor distraction. For unhappy relationships even minor discrepancies of

contributions will contribute to dissatisfaction and conflict.

Cate & Lloyd (1992) also provide some practical ideas for creating lasting relationships. Marrying a little older for example, allows for better preparation and a better socioeconomic platform for marriage. Furthermore, they suggest we try to get over the infatuation stage and evaluate the prospective partners level of neuroticism and maturity because we all carry some baggage from past relationships, but some people's burdens impact negatively on intimacy. Thirdly, happiness is also somewhat dependent on getting out of the blaming game. We should give our partner the benefit of the doubt and be willing to attribute positive dispositions and intent, and reward all positive acts by word and deed. These steps may avoid the trap and cycle of misery that lead to dissolution of relationships that once promised intimacy.

8.13 Making real commitments

Commitment is discussed in the psychological literature from several perspectives. Can your partner make the commitment and is it for the long haul? There are three variables related to commitment (Rusbult, 1983). The first is the accumulation of all the rewards of the relationship. The rewarding aspects of a romantic relationship are by far the most important determinant of satisfaction (Cate, Lloyd, Henton, &Larson, 1982). The support we receive, sexual satisfactions, home security, adventure and novelty, are all-important rewards that contribute to lasting relationships.

The second variable concerns the temptations of alternative partners. This may decrease commitment. The fewer alternatives that are present the less likely that the relationship will flounder (White & Booth, 1991). When the partners are young there are more temptations and more alternatives, but as time passes there are fewer alternatives. If you see your relationship as the only one possible, and if the feeling is mutual, the relationship will be more satisfying and lasting. Finally, the investments we have made may determine commitment. If we have invested a great deal in our mutual history, children, home, common religion, we are likely to stay within the relationship. More committed relationships produce more interdependent lives where the focus is on the unit and not the individual (Agnew, Van Lange, Rusbult, & Langston, 1998). The more committed can more easily adjust to demands and stresses of life such as the arrival of a new child. Commitment also encourages forgiveness, the feeling that one should never let the sun set on a bad argument (Finkel, Rusbult, Kumashiro, & Hannon, 2002).

8.14 The moral commitment

The foregoing emphasizes the social psychological factors that encourage commitment. For many in permanent relationships, commitment refers to basic integrity. From a moral perspective when you commit to another person your word should mean something, and support for your partner is for the better or worse of life. For some, moral commitment is a social obligation. It is the right thing to do for the marriage and the family. That does not imply that a relationship built on such commitment is loveless, on the contrary moral commitment may allow greater security and happiness. For some couples, commitment is also reinforced by religious beliefs. They believe that marriage is a religious duty not to be taken lightly. Marriage for some is an existential commitment; there are some things in life that are meant to last in an ever-changing world.

8.15 The positive view of life and the beloved

Much research points to the negative effects of having children on the happiness of marriage partners (Myers, 2000a). The arrival of children creates new conditions as children demand the focus of parents, and the relationship suffers. Partners often fail to return to the pre-child happiness until they are again alone after their children leave home. However, those who fight for their intimacy find it rewarding (Aron, Norman, Aron, McKenna, & Heyman, 2000). The key to marital happiness is to overcome boredom by finding new and exciting things to do as a couple. We all have needs for rootedness, but also for new and novel experiences. Those couples that build occasional excitement into their relationship feel more satisfied (Gable, Reis, Impett, & Asher, 2004). However, it takes an effort to do something new and different, and fighting for intimacy is a life long struggle. What novel activities couples can bring into their lives depends on many factors including socioeconomic variables and age. In the end it may be the effort toward renewal that wins over our partners and keeps the flame of intimacy alive. Rewards, pleasure and novelty are the keys to long-lasting romance and satisfaction with love and life.

8.16 Idealizations, positive illusions, and commitment

Romantic partners who feel “totally” in love manifest unrealistic, but delightful illusions about their partner’s behaviors and qualities. In chapter 2 we discussed positive illusions and mental health. Do such positive illusions also contribute to satisfaction and enduring relationships? There is much to support that contention.

Partners who have positive illusions can think of nothing negative about the beloved. With powerful positive illusions dominating our perceptions, we experience the behaviors of our partner as rewarding and feel stronger commitment to the relationship. Murray (1999) suggested that satisfaction, and stability of a relationship depended on overstating the positive qualities of the partner. Those in love look at the behavior and reactions of the partner in the most positive way, consistently giving the partner any benefit of doubt, or not allowing doubt in the first place. The idealization of romantic partners is an essential component in satisfaction of intimate relationships (Murray & Holmes, 1993; 1997;Neff & Karney, 2002).

With positive illusions we overestimate what is good and underestimate the negative. Remember the results of reciprocal liking! In a similar way, idealizing the partner produces mutual liking and more relationship satisfaction. Even when asked about the partner's greatest fault (Murray & Holmes, 1999), romantic participants were likely to refuse to accept the presence of any fault or turn it into a virtue. For example, if the partner was not ambitious, he was still a wonderful husband who helped around the house. If the partner did not express emotions, well it was because he felt so deeply, and expressed his feelings in other ways. So even the partner's emotions were idealized (Hawkins, Carrere, & Gottman, 2002). In a study where the partner rated how much positive affect was expressed in a discussion on conflict, satisfied romantic partners overestimated the positive expressions of their partners when compared to neutral judge's perceptions. In general, romantic couples that are happy see the interactions of their partner in a continuous positive way. There seems to be no substitute for happiness in couples, and it is as if a romantic partner can do no wrong. Having these positive illusions contributes to lasting relationships.

Even though half of all marriages in the US end in divorce, romantic illusions lead to the belief that one's own marriage will succeed. Most people are unrealistic on probability grounds, and think there is little or no chance for divorce in their future (Fowers, Lyons, Montel, & Shakel, 2001). We can also see positive illusions at work when participants were asked about the quality of their relationships and these outcomes are compared to ratings of those who knew them well, such as parents and roommates. The participants were primarily positive and saw fewer obstacles to success than did those who were intimate observers. The observers were more evenhanded and saw both the strengths as well as the problems in the

relationship.

Positive illusions are aided by our faulty memory. Many people believe their relationship is getting better all the time (Frye & Karney, 2004). For example although women's satisfactions declined in a longitudinal study, the participants expressed beliefs that their current relationship was better than ever (Karney & Coombs, 2000). It is of course very useful to longevity of relationships that we do not remember the bad times or believe those days were better than was actually the case. It is helpful to long-lasting marriages that couples see an unbroken path to an ever improving and more intimate relationship. The relationship bias is found in American, European and Asian cultures (Endo, Heine, & Lehman, 2000). Participants consistently rated their own relationships better when compared to those of the "average" students. These results together demonstrate the functional utility of unconditional positive regard. If we want to be successful in love, we must really love the beloved!

Summary

This essay covered the most significant relationships of human life from the initial attachments to long lasting commitments. We introduced evolutionary psychology in an attempt to understand the initial attachments of infants present in all societies and cultures. The examples of feral children in the literature and the absence of discernable human traits in these children support the idea that human traits are forged in the interaction with significant others. There is also much to suggest that early attachment forms the basis for later relationships. The inference from Harlow's studies is that social isolation is traumatic and results in abnormal development and adult personality. Humans have an even longer dependency period than the monkeys studied by Harlow, and need nurturing to survive. The bonding that occurs initially with the mother becomes the basis of all other bonding relationships.

If the need to belong is a biological drive, is that expressed in the universality of the mother-child relationship and romantic love? If the need to relate to other people is a biological drive, the need to belong should be satiable. When not sufficient the individual will reach out to establish new relationships; however, when sufficient there is no longer a motive to do so. Our relationships are essential to our sense of well-being and happiness. Those people who are deprived of supportive relations largely live unhappy lives, and isolation has negative consequences for health. Our relationship history defines largely who we

are and the attributions we make.

The role of biology can be observed in the preferences of the two genders for qualities in the opposite sex. In all cultures women prefer men with material resources, and men prefer youth and beauty. Perhaps this finding could reflect the relative size differences between the two genders and the historical control of males over economic resources. On the other hand the evolutionary perspective suggests that these differences have a reproductive cause. There is no resolution of these varying interpretations, but the gender differences exist.

The experience of loneliness has many negative consequences. People may have an optimal number of relationships and still feel lonely. Perhaps the relationships are not satisfying some basic emotional needs for intimacy. We do know that those who live rich emotional lives are less dependent on others for satisfying emotional needs. There are those who are chronically lonely. Often that is related to the mobility and temporary nature of relationships due to movement, death, and life changes. Demographic variables may also play a role as the poor struggle with many forms of insecurity and have less time for relationships. Youth is a time of special danger of loneliness as biology demands attachments especially in this stage of life.

The initial attachment is with the mother; later in normal development attachment is expanded to include the father, other family members and friends. The caregiver's own sense of security and warmth is of signal importance to the infant's attachment style. If the infant is secure and feels the human warmth of its mother, a similar pattern can be expected in adult attachments. The infant attachment style is stable over the individual's lifetime, and those who were emotionally secure as infants will find it easier to develop similar healthy relationships as adults. Traumatic life events may also affect our ability to establish and maintain secure relationships. The death of a parent or divorce may produce lasting insecurity in the child. Secure attachments bring many benefits to the individual. Secure individuals bring out the best in others as they generally look for the positive even for negative behavior. Consequently there are fewer health problems and divorce among those who possess a basic sense of security.

Cultures produce somewhat different relationships and expectations. Some cultures are communal and put the interests of the family ahead of that of the individual. In these cultures resource distribution depend on the need of the

family member at least as perceived by controlling heads of families. In individualist cultures the rights and needs of the individual is primary, and people generally look after number one or themselves. Some societies are authoritarian like the military, and emphasize status and the established hierarchy. In modern society in which individualistic culture dominates we see more emphasis on equality in resource distribution and outcomes. The question that couples seek to answer is, is the relationship fair.

Relational self-theory is based on the idea that prior relationships provide the framework for understanding our current attitudes and behaviors. If your current lover, boss or other significant person remind you of someone previously significant in your life, you may transfer the feeling you had from that previously significant person to the current relationship. Those who remind us of a positive relationship will have positive feelings transferred to the current relationship. Our past relationships may affect us at the automatic level and we may remain unaware of how these previous relationships affect our current thinking. Previous relationships form the basis of memories and social cognition. We also include family and close friends in our attributional biases, believing that the success of our beloved is due to personal dispositions, whereas failure in those close to us is thought to be caused by unfavorable environmental factors.

Liking someone is the start of relationships. In all its simplicity, we like those who are rewarding to us and we dislike those who are a burden. The literature supports the importance of some antecedents to liking; these include propinquity, similarity, and physical attraction. We tend to like those who live near us because propinquity provides the opportunity to meet, and repeated exposure creates feelings of familiarity. This is an optimistic finding from social psychology that suggests that many relationships are possible in a person’s life given the opportunity. The mere exposure effect supports the idea that repeated exposure leads to liking as exposure creates feelings of safety and security. Proximity may mask another variable important to liking relationships, that of similarity, as we often live in social environments where people share common values, or other characteristics. Also long distance relationships are more difficult to maintain and therefore more costly. Similarity is a powerful variable in liking relationships. We marry those who are similar to us in social class, religion and values. The more similar we are to someone, the more we like the other person. Dating services are based on the idea that a good match is with someone who is similar in values,

attitudes, and even physical appearance. The reason similarity is central to liking relationships is that it provides a common platform for understanding the other person and therefore promotes intimacy and trust. Of course it is also reassuring to have our values confirmed by another person. Again, the similarity may be caused by selectivity of the social environment which produces shared experiences and therefore bonding. Those who come from the same culture would have a large set of experiences and values in common not present to outsiders.

Nothing can beat reciprocal liking in eliciting positive feelings; we like those who like us. Reciprocal liking is even more powerful than similarity in producing liking toward someone. Personal traits are also important. The research supports the significance of personal warmth and competence in producing liking in most people. Most members of the sexes are attracted to the opposite sex. Do opposites attract? It seems that opposite attraction holds only for the sexual relationship. Only a few complementary personality traits affect attraction. Although society is moving toward more tolerance on different ethnic relationships, these changing attitudes may only reflect changing norms and may not hold for the individual's own family.

Physical attractiveness is a powerful antecedent to liking. There is in fact little difference between the genders, both like the physically attractive member of the opposite sex. It seems that physical attractiveness is the single most important variable in eliciting sexual desire and arousal. There are some gender differences. Women place greater importance on economic security and stability when considering marriage. They will therefore marry a less desirable male, or an older male, who possesses material resources. Evolutionary psychology would say that these gender differences exist for reproductive reasons. To form family, women must have stable partners. However, as society advances toward economic equality, both sexes place more importance on physical attractiveness.

The physically attractive have many social advantages. All societies subscribe to the "beautiful is good" norm. One consequence is the attribution of positive traits like competence to the physically attractive. It is no wonder they also experience more socio-economic success. Culture determines somewhat the features that are considered attractive. However, there are also universal traits considered attractive in all cultures. Faces that signal reproductive fitness and health are considered attractive in all societies. This lends support to the evolutionary perspective. Faces that typify the norm, and express bilateral symmetry also have

universal appeal. From an evolutionary perspective these faces signal reproductive fitness.

In today's world the market place economy dominates in all aspects of culture and interpersonal interactions. Interpersonal attraction is also dominated by market ideas. The theories of interpersonal attraction emerged in western capitalist societies and reflect therefore common social ideas of rewards, costs, and fairness. Social exchange theory states that relationship liking depends on outcomes that is defined as the rewards minus the costs of a relationship. The theory suggests that relationships have rewards, but also costs and the rewards must be larger for the relationship to be lasting and satisfying. Our satisfaction may also to some degree depend on past relationships that serve as a comparison level. Equity theory states that contentment depends on equity, the give and take in a relationship. Essentially equality and fairness is what governs relationship satisfaction from this perspective. In modern times this perspective in intimate relations leads to tiresome negotiations, issues perhaps better solved by consensus about division of responsibilities.

Theories of interpersonal attraction seem more valid for functional relationships one might find at work or school. Western-based societies are more based on exchange, equity and market economies, whereas societies in Asia are more communally based. In communal relations the outcome for the individual depends on need. Also in close relationships, topics dealing with emotional support and satisfaction are relevant, and altruistic behaviors are expected.

Relationship satisfaction depends also on other factors. First of all the level of investment in the relationship in terms of children, common history, and economic achievements may affect stability. Secondly, what is the level of commitment, and do the partners have alternatives and other prospects? In all these cases, intimate relationships are dominated by the long view, and not just the immediate reward. Thirdly, self-disclosure is an essential factor in building trust and intimate relations. When self-disclosure is reciprocated, such behavior leads to intimacy. Self-disclosure is perhaps more important in individualist societies, as in collectivist societies couples are more inhibited. Women disclose more within same sex relationships, and men are more cautious. Men are more likely to share risk-taking experiences, whereas women will share concerns about appearance.

Romantic love differs from friendship by its emphasis on sexual interest, by the fascination and infatuation with the partner, and the exclusiveness of the relationship. Such relationships are emotional and exciting. Men and women experience intimacy in similar ways, but women are more likely to express the feelings that lead to intimacy. Romantic love can be defined as intimacy combined with passionate feelings. When couples also feel commitment there is the basis for lasting relationships. Having a successful romantic relationship is basic to feelings of well-being and health.

However, we can observe by the reported divorce statistics that all is not well in marriages. This discontentment appears a tragic commentary on our inability to adjust to changing gender roles as society moves toward more equality. Central to many relationship failures is a preoccupation with fairness and endless negations requiring change in partners. Personality also matters in discontentment. The neurotic individual's preoccupation with negative emotions kills intimate relations. The neurotics bad past experiences influence current expectations, and cause the neurotic to act with strong emotion to any conflict. Stress as represented by socio-economic factors may produce discontentment. The poor are struggling with many forms of insecurity and have little time for intimate relations. Likewise the young are at risk for divorce as lacking the maturity, and struggling with many stresses.

Conflict in relationships comes furthermore about when we interfere with a person's preferences, or frustrate important goals. The behavior of the partner may also have an effect. Drug abuse for example kills the possibility of intimate relations. Attributional blame is also toxic, along with endless criticisms, denying the existence of problems, and displaying the emotion of contempt toward the partner. Breaking emotional ties is extremely painful. The party that is least responsible suffers more unhappiness. What can be done? If we believe in social exchange and equity, we can increase rewards and seek to develop more fairness in the relationship. Presumably the more rewarding and fair our relationship, the more happy. We can also just love more.