

On your own within a network? Vulnerable youths' social networks in transition from school to adult life

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This article is based on longitudinal prospective life-course data (1995-2007) about Special Educational Need (SEN) students in upper secondary school, addressing changes in these vulnerable persons' (N=372) spare time-related social relationships at age 29 compared to five years earlier. Logistic regression analyses show that experiences of exclusion (being solely in special class) during upper secondary school have a marked negative effect on being in a small and potentially isolating social network at age 24 compared with the variables personal diagnostic characteristics and experienced psychosocial stress in the family. Applying the same explanatory model to the adaptive situation at age 29 reveals very different results: time distant variables (special class, personal characteristics at school start) loose effect. Contemporary independent variables describing a contextually changed life situation produces patterns of social integration, reducing social marginalization. The results suggest that a shift in the life situation in adulthood (having work, own family, driver's license) changes network characteristics and agency from being self-realising and individualistic towards a more collective, altruistic and self-sacrificing action pattern in social relationships. This shows a pattern of resilience. Theoretic approaches are life-course theory, theory of frame conditions, network theory, theory of disability and critical realism.

Keywords: vulnerable youth; life-course transitions; effects of attending special class; social network; logistic regression analysis

Introduction

In Norway, more than 96% of students leaving lower secondary school in the spring of a particular year begin upper secondary education in the autumn, and, through an extensive institutionalization, the complete age cohort continues in the comprehensive school up to the age of 20. School has become a meeting place for all youth, including vulnerable youth who are at risk for later developmental challenges. Learning takes place outside production. Therefore, marginalization and the risk of social exclusion are deeply rooted in the school (Frønes 2010; Hockey and James 1995). Approximately 10% of the national age cohort is considered to require special education. This longitudinal study addresses this group, and we refer to this group as vulnerable youth because characteristics of their special educational needs and the special educational provision of measures they experience may produce a school situation with risk of disqualifications for adult life.

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Vulnerable youth refers to the young persons of the cohort who started the upper secondary education in 1995 and were identified by the support system to need special educational support. The reasons for the need of special support were either personal (having language and communication difficulties, psycho-social difficulties, and intellectual disabilities), or related to the family situation in which the adolescent was living at the start of upper secondary school – specifically, the level of conflict and antagonism in the family and whether or not the adolescent was subjected to psychosocial stress. Totally, thirteen categories of disabilities/difficulties¹ were identified (also used by Skårbrevik 1996), but restricted to four in the present study. The majority of vulnerable youth are in vocational programmes, where the dropout rate during the last few years is considerable – approximately one-third of vocational education students guit upper secondary school (SSB 2012). For the SEN students in this project, the rate of students being off-time or decided not to complete school is after five years even higher (about 50%). The period from when people complete upper secondary school through their twenties is particularly eventful and consequential because, individuals usually complete their education, get jobs, change residences, enter marriages or cohabitations and become parents - what is called transition density in theory of life-course research (Elder, Johnson, and Crosnoe 2006). This also represents a potential of alternative transitions than completing upper secondary education. For vulnerable youth, the transition to adulthood represents an even greater challenge, although this varies among countries. Osgood et al. (2005, 1–26) conceive the core of this situation for the vulnerable youth, as being on their own and without a 'net', which means being without a security net. The present study addresses the transitional situation of the vulnerable youth in our Norwegian data material.

Traditionally, social exclusion refers to social problems related to unemployment, low income, bad housing conditions, bad health or social isolation (Halvorsen 2002, 162). However, our perspective is more limited and is restricted to the aspect of active social adaptation. We develop and become human beings through informal social interactions with others, which place relationships in a central position in our life course (see, e.g., Mead 1934, in Vaage 1998). The social networks of young people may vary in range and patterns of composition of age, gender, family, friends, schoolmates and professional colleagues. Even within a social network, a person can be alone, on his own, or independent. We want to study the degree to which earlier SEN students in upper secondary school experience social marginalisation or not (i.e. social exclusion or inclusion) in their transition to adult life. The dependent variable in the present study is based on four social adaptive situations defined by combining the dimensions network size (high and low) and network density (high and low), representing different sets of cultural norms and values and, consequently, different social and cultural capital. This typology of four social adaptive situations is further described in the paragraph Methodological reflections - analytical approach and model construction and in Kvalsund and Bele (2010a). The dependent variable, the social adaptive situations, is indicated by the size of the social network within which the vulnerable youth usually has contact; is the network small or not? Two central aspects are relevant when the network size is small: there are only one or two persons in the network except for the person herself (isolation), and the relations between the persons are close, meaning that all or most have relationships to one another. Being in a small network therefore means a network characterized by inward directed and bonding adaptive situations² with the risk of social isolation. On the other hand, young persons may have many but parallel or bridging network contacts, implying a large network with low network density. Or are

they usually in *larger networks with high density*, i.e. that nearly all the persons have contact with each other, opening up for social including situations (see, Kvalsund and Bele 2010b). These networks may be different combinations of friends, family members, relatives, neighbours, work mates, age and gender (for the distribution of these groups, see Figure 3 in Kvalsund and Bele 2010a). In the present study, we emphasize the qualities related to social adaptive situations; the *network size* and the *interactions within the relationships*. Our general research question is: What are the independent variables (personal factors, psycho-social stress in the family, having been in special class or not – all at the start of upper secondary school) that explain the pattern of adaptation (marginalization or not), and how can we understand it, grounding the process in data about life-course transitions? If these independent variables no longer do have any explanatory effect, it may be possible that some new independent variables related to a changed life situation have any explaining value after the transition to adult life.

Based on a longitudinal study using three different data sets during the period 1995–1996 (T0), 2002 (T1) and 2007 (T2), the present article aims to study changes in the social adaptation of vulnerable young people over time, from the time they leave upper secondary school to beginning adult life and further adulthood (for detailed discussions of changes and dilemmas of research methods in this transitional process, see Myklebust et al. (2012).³ The first step is to present previous research in the field.

Vulnerable youth and social networks: previous research

Students' relationship experiences during the qualification process of the school years are likely to substantially affect their social learning. This relation is an important but underresearched concept. However, in 2002, a Norwegian longitudinally designed study of vulnerable students who started upper secondary school in 1995, identified by experts as SEN students, addressed the life-course transition of these students from upper secondary school to early adult life at approximately age 24 (Kvalsund and Bele 2010a, 2010b).⁴ This cohort of students who entered school in 1995 has been studied exhaustively for many years in different domains of life, such as work life, spare time, further education, and social security (see, e.g., Kvalsund and Myklebust 1998, Kvalsund 1999; Myklebust 1999, 2004, 2006; Myklebust and Båtevik 2005; Kvalsund and Bele 2010a, 2010b). In a main strand of this longitudinal study, the general interest of Kvalsund and Bele (2010a, 2010b) was to better understand how the relative impact of social learning in schools affects the actors' social adaptation to early adult life in 2002, at the age of 24. We followed vulnerable youth through school to adult life based on the hypothesis that informal learning processes taking place within schools as social systems would be directly expressed and recognized. The social learning of mainstream students provided the context for comparative dimensions of the process expressed by the concept 'inclusion in disabling schools' (Kvalsund 2004a). The results indicated that having been a special class student in upper secondary school significantly affected the informal social learning, agency and network-building abilities (social marginalization/integration) of vulnerable youth even two years after they left school. This is a reasonable effect of having had restricted possibilities in making social experiences.

For most people, having friends at the beginning of adult life is most likely as important as academic learning, if not more so (see, e.g., Grøgaard, Hatlevik, and Markussen 2004, 102–103). Social relationships are fundamental in the process of developing and protecting oneself as a person. However, there is a trend in the research literature to consider the social networks of disabled people as small, restricted, and

practically isolated, whereas 'normal' youth have varied and diverse networks (see, e.g., Bø and Schiefloe 2007, 116, 138). Thus, there are important substantive and methodological reasons that research on special educational provision lacks conditionand process-oriented studies (Dale and Wærness 2003; Markussen, Frøseth, and Sandberg 2011; Haug, Tøssebro, and Dalen 1999; Markussen 1999; Solli 2005; Tøssebro and Ytterhus 2006). Furthermore, most studies are cross-sectional, and longitudinal research is especially rare (Befring and Sæbø 1993; Holmberg 2001; Kvalsund and Myklebust 1998; Myklebust 2004, 118ff; Ogden 1999; Wendelborg and Tøssebro 2011; Wendelborg and Ytterhus 2009), making longitudinal studies particularly valuable.

Research theme and objectives comparing 2002 and 2007 data

Shortly after upper secondary school, spare time networks typically seem to be friendoriented, whether the adolescents are on time, implying that peer relationships are particularly important. Having a network of friends is an indicator of being an adolescent in a 'normal' way (Kvalsund and Bele 2010b). In analyses of 2002 data, we observed different types of networks. One type was the *strategically formed and planned network*, a compensating and benefit-calculating kind of network organized by adults trying to compensate for the vulnerable young person's difficulties. This network type can be protecting or isolating, e.g., consisting of only a few close family members and perhaps a public helper (being within a 'net'). However, networks can also be spontaneously formed, in which the young person actively makes choices to maximize personal benefit, reflecting personal initiative and self-realisation in establishing contacts and social networks. Spontaneously formed networks may begin a bridging process, leading to inclusion. Nevertheless, in some spontaneous networks, the young person may experience personal defeats, because he or she is unable to keep up with activities, such as, for example, dancing, dating, etc. (being without a 'net'). These two adaptive settings comprise the core of every-day social inclusion and exclusion.

In their late twenties, some young adults have children, find gainful employment and acquire their own residences. Others may have changed situation from work to dependence on social security. Therefore, in studies of life-course transitions, changes in the cultural context are the point of departure. However, not only time is passing. Changes of life context for young people during their twenties also may be indicators of a change in network characteristics, pointing to altruistic and self-sacrificing actions in social relationships as a complementary alternative. In a life phase when many young adults are forming own families, participating in work life, and increasing their geographical mobility by driving cars, how do these changes affect vulnerable young adults' chances of forming social relationships and networks? And what does it mean to participate in activities with peers in their late twenties? Can we identify complementary explanatory factors behind the pattern of social adaptation when comparing young adults' situations in 2002 and 2007? Do we find reinforcement of previously explanatory factors, such as having attended special class in upper secondary school? Or can we speak of a compensation hypothesis about the relationship between independent and dependent variables? Based on prospective longitudinal data, we want to study whether the factors of risk and resilience at age 24 may have reduced or increased their relative strength and explicative weight over time due to factors of the subjects' changed life situations later in adulthood.

Design and methodology

The design of our study has two main dimensions – the *strategic* dimension and the *underlying logic* of the study. The strategic aspects are when and how to obtain information and data from selected actors within the framework of ethical research. This is the research plan of the different phases of the study – from the formulation of goals, research themes and questions to methods of analysis and results of social integration and marginalisation. The present study analyses changes in social integration and marginalization from school to adult life, i.e., among vulnerable youth within a perspective of social justice. Designing the study therefore implies developing models that help us understand and explain changes in social integration and marginalization over time as well as the strength and direction of possible explanatory factors and their relative importance. Studying changes over time gives direction and orders variables as independent and dependent. In our judgment, this organization is best conducted within a longitudinal design, through an analysis of prospective rather than retrospective data about life-course transitions from school to the beginning and establishment of adult life (see Figure 1 below, discussed further in the Methods section of this article).

Comparisons are made of changes in adaptive situations of social integration at two different points of time over the five-year period from 2002 (T1) to 2007 (T2), i.e., the results go beyond cross-sectional correlations. Considering possible changes over time complicates the phenomenon studied: actors might change with age, and the life situation and context in which the actors are embedded may also change, reflecting structural changes in networks and contexts as well as changes in related cultural norms – in other words, changes in life-embedded patterns of normality over time.

Time and changes over time are part of the second dimension of research design, contributing to the underlying logic or philosophy of the study. This dimension encompasses our views on both *ontological* aspects, or the nature of the objects of knowledge, such as the transitional changes of social integration and marginalization, and epistemological aspects, such as the conditions of knowledge, e.g., what can we know about them? From a methodological perspective, this type of analysis can be anchored in the theory of critical realism, as represented by the discussion of the relative definition of disability and handicap (Gustavsson 2004), and founded in a critical-realist framework, as presented by Bhaskar and Danermark (2006). Critical realism represents a non-reductionist schema of understanding disability and vulnerability, a system that incorporates several different levels of reality (Bhaskar and Danermark 2006, 280), as do our theoretical frame of reference, life-course theory, referring to linked lives and social relations, historical time and place, transitions, agency and chance. In this article, this means that we identify psychological and socialpsychological factors (e.g. intellectual disabilities, behaviour problems) as well as factors of situated activities (e.g. teaching and learning in special classes or groups of four), and socialpsychological and sociological factors in different settings and contexts such as classroom and family, without making reduction to one of them. The factors are treated with equal weight in the model of analysis of logistic regression.

The explanatory mechanisms of interacting factors are – independent of our concepts and theories of it and outside our minds – real but not necessarily observable, such as the mechanism we seek to formulate by our models of logistic regression, illustrating that the strength of one mechanism might change over time due to changes in the situation of adaptation experienced by the actors in our study. We can speak of mechanisms and counter-mechanisms with changing strength of explanatory factors such as personal characteristics, school culture, special educational provision and family situation. Because

Data collection design – longitudinal data	Extensive quantitative prospective data				ulitative prospective ospective data	
	Spring	Autumn	Year	Spring	Autumn	
		Cohort I: Begin upper secondary education	1994			
		Cohort II: Begin upper secondary education	1995			
Project I: Reform 94 – Special educational needs.	1. Data from the schools (760)	2a. Data from the schools. Abbreviated questionnaire (1265) 2b. Data from the schools (760). (Sum 2025, Population)	1996			
	3. Data from the schools (760)	4. Data from the schools (760)	1997		in 20 schools with 162 boys, girls, vocational,	
	5. Data from the schools (760)	schools (700)	1998	general study, ethnic and bilingual Norwegian), 110 teachers, school counsellors, administrators and headmasters; 272 taped interviews of 45 minutes each.		
	6. Data from the schools (760)	7. Telephone interviews with parents (489)	1999			
			2000			
Project II:			2001			
Adult life on special terms?	8. Telephone interviews with 494 former SEN students (response rate, 65%)	9. Telephone interviews with 494 former SEN students (response rate 65%)	2002			
	Tate, 05%)		2004	Qualitative intervi	ews with young mothers	
	and special education	orks during spare time,				
Project III: Vulnerable youth – transition to adult life	10. Telephone inter SEN students (respo	views with 372 former onse rate, 59%)	2007			
Project IV: Adult life in the late 20s and early 30s.	11. Telephone inter- young adults	views with vulnerable	2012			
205 did carry 508.			2013		ews with selected groups	
	12. Telephone inter- young adults	views with vulnerable	2015	Qualitative intervi	ews with selected groups	

Figure 1. Data collection design for the longitudinal study. The present study is based primarily on data from Project II, Project III and Project I.

Note: Project I, 'Reform 94 – Special educational needs', was funded by the Norwegian Ministry of Education and Science. Project II, 'Adult life on special terms?', was funded by the Welfare Program of the Norwegian Research Council. Project III, 'Vulnerable youth – transition to adult life', was funded by the Norwegian Research Council, Volda University College and Møre Research, Volda. Project IV, 'Adult life in the late 20s and early 30s was funded by Volda University College. The present study is based primarily on data from Project II (from Kvalsund and Bele 2010a and b) and Project III but also on data from Project I. For Project IV, 'Adult life in the 30s', telephone interviews were conducted with the young adults in spring 2012. For further details on the data collection process from 1996 to 2007, see Young Adults Data Collection 2007 (Båtevik and Myklebust 2007), available at http://www.hivolda.no/neted/site/group1/notat16 07.pdf.

reality is layered, it is not transparent. However, the mechanisms of reality can be experienced indirectly through events that cause them.

Because critical realism views reality as independent from the human mind, researchers produce interpretations – concepts and theories – of reality, which by necessity are fallible and provisional, e.g. the two explanatory models; one for 2002 data and one for 2007 data. Bhaskar (1998) refers to the interpretative dimension of our theories, explanations and related critiques as the *transitive*, or changing, dimension of social-science knowledge. In this study, the transitive dimension is exemplified by the construction of the typology of adaptive situations in adult life and the different concepts of normality (medical concept and social concept). The *intransitive* dimension of social-science knowledge refers to those causal mechanisms by which social science seeks to explain patterns of events, such as mechanisms that exist regardless of our linguistically constructed concepts. However, the objects of social science are real and exist intransitively as generative or counteracting mechanisms behind the events, operating here and now independently of intentional actors. In this study, we have made constructions as well as attempts at tracing explanatory mechanisms. (See also the discussion paragraph).

The traditional assumptions, what is referred to as the medical model (Barnes, Mercer, and Shakespeare 1999; Priestley 2003), understand disability and vulnerability as negatively deviant traits or attributes within individuals. The social networks of people with disabilities and vulnerable are therefore assumed to be reduced and small. Thus, we try to *trace* explanatory mechanisms behind social adaptation by formulating a model of the relationship between blocks of independent explanatory variables and the dependent variable over time (see Tables 2 and 3, and Figure 2). Due to the complexity of these phenomena, we extend

Theory/model – analytical frame of reference – Transition to adult life

Reconstruction 2 Framing conditions 1 Results 3 Processes - disabling schools? Personal factors. Non-Non-Gender, Language and intended intended communication problems, consequences consequences Intellectual disabilities, Behaviour problems Social Social or not? marginalimarginalisation - or sation - or 'Time-table culture' in not? not? Family situation disabling schools. Adaptive Adaptive Psycho-social stress Framing context and situations situations or not? settings - structural compared compared aspects. 2002 2007 Life situation after transition. Partner, Being in special class children, driving - or not? license– or not? Resilience? (T0) 1995 1999 (T1) 2002 (T2) 2007

Figure 2. Theory/model – analytical frame of reference – Transition to adult life. The interconnection among categories of independent variables (in three Norwegian longitudinal research projects): personal factors, family situation, special educational measures and changed life situation variables.

the assumptions about social adaptation and networks in early adult life by including explanatory factors of earlier schooling and family situation as well as the life situation in adulthood - i.e. time distant as well as contemporary independent variables.

Theoretical perspectives

Theory has the function of being a tool in our attempts of interpretation, understanding and explanation. In the present study, varied but complementary theoretical and methodological approaches are used. With reference to the open frame factor theory (Dahlöf 1971; Kvalsund 1995, 2004a, 2004b), the independent condition and process variables of schooling, i.e., the possibilities and restrictions of the social frames, often become a matter of routine within organizational culture. The frame factor theory reminds the researcher of the historical dimension and time, reminding us that understanding and explanations has to be based on reconstruction of events that have already happened. Therefore, results of some kind – here social marginalization – are dependent variables of the model. The next question of reconstruction is: What are the frame conditions and the processes through which the conditions have worked to produce the results? Frame conditions and processes are independent variables of the model (see Figure 2). In Figure 2, the different points of time of the data sets are presented as well: T0 (period of upper secondary, 1995–1999), T1 (beginning adult life, 2002) and T2 (adulthood, 2007). Personal factors (gender, communication problems, behaviour-problems) and family situation (psycho-social stress) are judged by specialists (see end note⁵) and registered the first year in upper secondary (1995), as well as being in special class (group of four). Being in special classes is grounded in what Kvalsund (2004a) has shown to be an excluding culture of educational practice, 'the time table culture' (see Figure 2). This phenomenon is described as disabling schools, referring to schools valuing main-stream teaching to the detriment of special adapted education for SEN-pupils, schools being more a working place for adults than a leaning place for young vulnerable youth. The effects of independent variables on two different dependent variables are analysed at two points in time in a transition process from school to adult life for vulnerable youth. Our study has traced long time effects of these variables.

Extending the frame factor theoretical perspective, we refer to life-course theory, the concepts and principles of which have considerable empirical grounding, as our overarching theoretical framework. Perspectives from life-span psychology (Diewald and Mayer 2009; Rutter, Giller, and Hagell 1998; Wyn and White 1997) and life-course sociology (Mayer 2009; Elder and Giele 2009) are combined with elements from disability theories (Stewart et al. 2010; Kvalsund and Bele 2010a; Priestley 2003; Barnes, Mercer, and Shakespeare 1999; Oliver 1996) and social network theory (Pachucke and Breiger 2010; Wadel and Wadel 2007; Scott 2000; Wasserman and Faust 1994). These theoretical approaches are relevant for a deeper understanding of the layered social reality within the perspective of critical realism. To mediate the intransitive aspect of social reality and move beyond the everyday experiences of the actors (the 'emic' position), researchers have a duty to take the everyday experiences of the actors (the 'emic' position), researchers have a duty to take the everyday complementary level of integration and meaning, reflecting contextual complexity over time.

According to the life-course perspective, the sum of a person's trajectories is made up of past, present and future events in education, work, family and leisure life (e.g., Elder and Johnson 2003) and can be used to analyse the movements of people through the life course. Life-course development is analysed as the outcome of personal characteristics

and individual actions as well as of cultural frames and institutional and structural conditions, relating both different levels of analysis, structure and agency (Mayer 2009, 414). In a short-term perspective, the life course can be captured by the concept of transition. Transitions often involve changes in status or identity, both personally and socially, and may open up opportunities for behavioural change, identified by a marked and permanent change in social norms, expectations and context (Elder, Johnson, and Crosnoe 2006; Elder and Johnson 2003; George 1993). Transitions are the empirically main issue in the present study, in this case from secondary school to beginning adult life and adulthood for vulnerable youth. As for the relation between empirical analyses and theory, the theoretical concepts are being used in interpretations and analyses. While the term life course refers to all areas in life, such as for example work and spare time, lifespan is limited to different phases in life. For these vulnerable youths, it refers to their personal special needs characteristics, their situation in the phase of upper secondary education, and also to the phase of beginning adult life. Common for these young persons were that they all belonged to the same cohort who all started in upper secondary school in the beginning of the Reform 94 in which the number of basic courses was reduced from 116 to 16. This leads to an increased abstraction level of the school's content. The implementation of this education reform also claimed increased throughput of students, and qualification of labour force rather than general moral education and clarification of the young persons' existential questions about their future. We restrict our perspective to study social adaptation and integration.

In the life-course perspective, it is also highly relevant to emphasize personal agency, such as the fact that the individuals actively construct their life course through their individual choices (Elder 1999). Furthermore, chance and misfortune may be accidental events that can cause new chains of events with crucial influence on the life course. This unpredictability increases the complexity of the changes we are studying, making the perspective of critical realism even more relevant.

We also use the concept of social network to concretize a central principle of life-course theory – linked lives. It is essential in life-course theory as well as network theory that important structural aspects and processes of a situation are formed by the relational and structural qualities and of a person's social network rather than by her individual characteristics (Wasserman and Faust 1994; Wadel and Wadel 2007). Linked lives within life-course theory can be studied using network analysis to identify patterns of social relations. A strong framing of the life course influences how personal status, dependence and power are socially established. This perspective indicates that the school phase of the life course is socially constructed (Hockey and James 1995), linking lives within special educational provision with marginalizing and possibly disabling consequences. For example, if students do not complete their education by obtaining a craft certificate or matriculation qualification in upper secondary school, this may be a continuation of their marginalization rather than a new situation (Kvalsund and Bele 2010a).

Disability theory can reflect both the medical and the social perspective on disability and can influence how relation formation is understood and analysed. Some of our selected concepts of network theory (e.g. network size and network density) and the disability concept have consequences for how we attribute explanatory factors of the persons' social networks – to the person or to the settings and context. By studying networks and social relations over time, one avoids only to focus on negative personal characteristics. For a more thorough presentation of logistic regression, see the method paragraph of this article.

7. Male

N

Methodological reflections: analytical approach and model construction

This longitudinal study is based on prospective data (different from retrospective data, cf. Belli, Stafford, and Alwin 2009) about personal and social factors used to analyse the effects of the interplay among explanatory factors produced over time (see Figure 1, data collection design, and Figure 2, the interconnection between variable categories). Longitudinal designs generate important knowledge of development over time. However, longitudinal research is demanding to sustain due to a lack of national funding, as has been the case for the present project, which currently receives only local funding.

This article is based on data from three different Norwegian national research projects following former SEN students over a period of 12 years. Project I, 'Reform 94 – Students with Special Educational Needs', began data collection in the period autumn 1995 – spring 1996. That effort was continued through Project II, 'Adult Life on Special Terms?', with the final data on the same admission cohort of young people collected in 2002. Project III, 'Vulnerable youth – transition to adult life, followed with data collection in 2007. The present study compares the extensive quantitative data sets from Project I (provided by the schools in 1995–1996, data set 1 in Figure 1) and Project II (from structured telephone interviews with young people in 2002, data set 8/9 in Figure 1) with the extensive data set from Project III (structured telephone interviews in 2007, data set 10 in Figure 1).

Different research methods are used; diachronic quantitative data analysed by logistic regression are connected to synchronous qualitative information to study the relationships between school experiences and adaptation in adult life. In 2007, 373 young adults were interviewed by telephone, with a response rate of 59%, which is acceptable for this kind of longitudinal study. We compared two data sets, from 2002 and 2007, that are closely overlapping rather than identical. However, a comparison of the population from 1996 with the samples from 1996, 2002 and 2007 for some central variables reveals little bias in the data (Table 1).

Nevertheless, according to the logic of critical realism, context and reality are very complex and change over time. Even with identical data sets, we have to consider a weaker causation in terms of *tendencies* between independent and dependent variables rather than a strong causation.

The complex context has consequences for the development of the explanatory regression model. It is important to anchor the variables of the model in a broad

samples (expressed as a percentage).							
Variables	Population 1996	Sample 1996	Sample 2002	Sample 2007			
Academic courses	14	12	10	6			
2. Vocational courses	79	76	78	81			
3. Unspecified courses	7	12	12	13			
4. In regular classes	58	51	52	44			
5. In special classes	42	49	48	56			
6. Female	37	39	39	38			

61

760

62

494

62 372

63

2025

Table 1. Comparing students identified as SEN students – 1996 population, 1996, 2002 and 2007 samples (expressed as a percentage).

discussion of experience, theory and research studies. This complexity also points to the risk that binary analysis of covariates in model development can lead to the unqualified exclusion of variables (e.g., O'Connel and Amico 2010, 228). The individual contribution of a given predictor variable as part of a multivariate regression model is computed relative to all other predictor variables of the model. Variables with a low bivariate correlation can turn out to have high relative explanatory weight in a regression analysis.

This kind of model and analysis is formed by dichotomized variables. We chose to pair this dichotomization with the perspective of resilience by coding the reference categories (0) of the independent variables as factors of resilience (e.g., 'in an ordinary class' or 'no psycho-social problems') and the event category (1) (e.g., 'in a special class' or 'large psycho-social problems') as risk factors. Risk factors from the school period of the life course can have weaker or stronger effects later in life, or the effects can vanish altogether in the changed social and cultural context five years later. This refelcts changes in 'linked lives' which is a central principle of life-course theory. We express or operationalize the dependent variable by a typology that operationally defines four social adaptive situations or categories of social capital by combining the dimensions network size (high and low) and network density (high and low) (e.g., Kvalsund and Bele (2010a): (1) Social isolating situation, (2) Social exploring and bridging situation, (3) Social intimate and bonding situation, and (4) Social including situation). The dependent variable of being a member of a small network (low network size) refers to the socially isolating, intimate and bonding adaptive situations in the typology (situations 1 and 3), whereas being in a large network (high network size) refers to the socially exploring/ bridging and inclusive adaptive situations (2 and 4). The adaptive situations represent different sets of cultural norms and values and, consequently, social and cultural capital (Kvalsund and Bele 2010a).

Logistic regression analysis must meet minimum sample-size demands. As a general rule, we restrict the number of variables of the model to 50 participants for each independent variable (Harlow 2005). Thus, a sample of 372 participants implies a maximum of seven independent variables in the model. Another guideline is that the highest number of independent variables in the model is determined by the criterion that the number of participants in the smallest response category of the dichotomized dependent variable should be at least 10 (p+1), with p being the number of independent variables (O'Connel and Amico 2010, 227; Hosmer and Lemschow 2000). As a consequence, in the analysis of the 2002 data, informal support networks are categorized as large if the most frequent contacts consisted of at least three members beyond the adolescent subject (based on research by, e.g., Bø and Schiefloe 2007; Walker, Wassermann, and Wellmann 1994, see, Kvalsund and Bele 2010b). However, this is increased to five members for 2007 data, because the number in the smallest subcategories of the dependent variable is too low with three members. This means that in 2007 data, it is easier to be registered as being in a small network. The general rule of parsimony is to explain the maximum number of relationships using a minimum number of variables. This challenge can be met partly by constructing index variables. However, logistic regression is likely to include a set of interactions among some of the independent variables, enhancing the predictions for the dependent variables and their relative explanatory weights. This fact makes it important to limit the co-linearity among the independent variables, not least in the index variable. The risk of co-linearity is shown to be acceptable if the inter-correlation among the chosen independent variables is low, < 0.4 (cf. O'Connel and Amico 2010, 233; Harlow 2005, 154). This criterion is met in the present study by restricting the present model of logistic regression to four independent variables. A higher number of variables would imply a risk that the model would display effects stronger than what actually is the case.

In this comparison between the 2002 and 2007 data sets, we used the same model used to analyse the data set of 2002 (Kvalsund and Bele 2010a, 2010b, and Figure 2). The social relationships in early adult life (at age 24) were then explained significantly by school variables (being in special class/group of four), whereas personal factors (language and communication difficulties, psycho-social difficulties and intellectual disabilities) and family situation factors indicated no significant chance for subjects to be in a small mixed network at the beginning of their adult lives (see the section on previous research above). In 2007, the dependent variables are 'being in a small network or not' and 'being in a network solely of young people of the same age or not' (Table 2).

Transition to adulthood has mostly been described through a series of transitional events, including completion of initial schooling, labour market entry, leaving the parental home, spousal union formation and becoming parents (for an overview, see Buchmann and Kriesi 2011). This is an intense life period for the young people in the present study, marked by many transition events that accumulate and partly overlap (Shanahan 2000; Elder 1985). To cover more important transition events in the development of social relationships among vulnerable young adults in the 2007 data set through their twenties, it was necessary to add concepts into our replicated theoretical analytical model that reflect changes in the context of spare time networks over time (Figure 2). This adds to the complexity of reality and the challenge of explanatory models – doing comparisons over time demand that the models reflect possible changes in situated activities because of structural changes in settings and context.

The model of independent variables was consequently supplemented by the life situation variables 'having children or not', and 'having a driver's license or not', representing the contextual changes in the life situations of subjects in their adult lives. It is also reasonable that social relations in this phase of life are strongly associated with the work situation as well as through forming a family. Before making an index variable of these two variables, 'having children/driver's license or not' (hereafter referred to as the

Table 2.	Overview of dichotomized dependent	variables to	1 2002 (11-4)-	+) and 2007	(1V-3/2).
			•	2002	2007

Overview of dichotomized dependent variables for 2002 (N=404) and 2007 (N=372)

	Values		2002		2007	
Dependent variables			N	%	N	
Being in a small network or not (Network size ^a)	0. Low	41	200	12	44	
	1. High	59	294	88	324	
2. Network density ^b	0. Low	45	223			
•	1. High	55	271			
3. Network solely of young persons at the same age or not	0. Not in network solely of young persons at the same age	41	201	29	106	
C	1. In network solely of young persons at the same age	59	293	71	264	

^aSee Kvalsund and Bele (2010b).

^bThis aspect was not explicitly analysed in the present article. However, we have studied network in small groups. As we include the total range of network density, from isolation to integration, we have also studied this network quality towards the isolating and bonding social adaptation (in Table 2).

'changed life situation variable', see Table 3), inter-correlation analyses were performed. The co-linearity between the independent variables was acceptable (lower than 0.4), with one exception, that between 'having a driver's license or not' and 'having work or not', which was 0.7. This result may be interpreted as though having a license and having a job reflect common aspects. Having a driver's license is both an indicator of agency that increases the potential for forming network relations and a resource in the labour market. Based on these reflections, we chose 'having a driver's license' as variable in the analysis. The core of the changed life situation variable is a change in the potential of

Table 3. Overview of the three categories of dichotomized independent variables in 2002 (*N*=494) and the four categories of dichotomized independent variables in 2007 (*N*=373).

		2002		2007		
	Independent variables	Values	%	N	%	N
I. Personal factors: Disabilities according to expert evaluation at the beginning of upper secondary education	Language and communication difficulties	0. No language and communication difficulties	78	388	93	348
·		1. Language and communication difficulties	22	106	7	24
	2. Psycho-social difficulties	0. No psychosocial difficulties	69	341	94	351
		 Psychosocial difficulties 	31	153	6	21
	3. Intellectual disabilities	0. No Intellectual disabilities	86	427	85	316
		1. Intellectual disabilities	14	67	15	56
	3. Gender	0. Male	61	304	62	232
		1. Female	39	190	38	140
II. Contextual factors: Family situation	4. Psycho-social stress in the family at the start of upper secondary education	0. No psychosocial stress in family	81	402	96	359
		1. Psychosocial stress in family	19	92	4	13
III. Contextual factors: School situation	5. Special class: Group of four at the start of upper secondary education.	0. Not in group of four	84	417	83	310
IV. Contextual factors:	6. Children/ Driver's	 Group of four No children/ 	16 -	77 –	17 11	62 41
Changed life situation variables in early adult life	license	driver's licence				
		1. Have children/ driver's license	-	-	89	330

forming social network relations related to personal agency and changes in frame factors and associated processes. Through the variable 'having a driver's licence or not', we judge to have a larger potential for making social relations than work, and at the same time reflecting the relations of the work situation. This is expressed by the high intercorrelation between these two independent variables. Moreover, the changed life situation variable represents both genders. Having children is more 'typical' for young females (52% versus 29% of the males), whereas more young males have a driver's license (78% versus 57% of the females).

Bivariate cross-table analyses of each dependent and each independent variable in pairs demonstrate the connections and correlations between the variables in our model. Such analyses indicate the chances (expressed as a percentage) that the young adults will be in a small social network at the age of 29, depending on whether they had different personal difficulties, experienced special class/group of four or a stressful family situation in the beginning of upper secondary school or were in special class at that time. The different independent variables influence each other in different ways. To analyse the complex variation among variables exerting relative effects at the same time, we chose logistic regression analyses (Norusis 1999; Ringdal 2001, 427ff). The statistical analyses were made in IBM SPSS Statistics 19 (earlier Statistical Package for Social Sciences, Version 19). However, weaker or stronger bivariate relations between independent and dependent variables can turn out to be different when analysed for their relative explanatory weight in a regression model. The theoretical construction of a model is therefore important and necessary before conducting the logistic regression analysis. For a further discussion of the presumptions of theories and operationalization of the model in the present study, see Kvalsund and Bele (2010a).

The prospective life-course study design has many benefits, but there are also potential inherent design problems associated with its longevity, particularly the risk over time of increased sample loss and possible distortion. The response rate of the present study is reasonably high, but it decreased over the years (Figure 1, Projects, I, II and III). However, an analysis of attrition reveals that the responding sample is reasonably equal in central aspects when comparing the data sets from 2002 and 2007. In the present study of the longitudinal project (Figure 1), we followed the vulnerable youth who started in upper secondary school in 1995, traced their transition to beginning adult life at age 24 (in 2002) and into adulthood at age 29 (in 2007). In analyses of 2007 data, personal capacities, experiences in school and their subsequent transitions to arenas such as work and independent living, family, further education and spare time are central for understanding these vulnerable youths' social adaptation to adulthood. In this study, we choose to use explanatory longitudinal analyses instead of correlation-oriented crosssectional analyses. Logistic regression analyses capture the time dimension and keep the order of the explanatory variables that allows us to explain and understand the relations between the independent and dependent variables (Harlow 2005, 154).

Results: the effect of changed life situation in young adulthood Effects on network size of strategically formed networks

The main conclusion of the analyses of 2002 data (T1) was that the experience of attending special class/group of four (T0) was decisive for whether former SEN students found themselves in a small spare time network (referring to an isolating, intimate, and bonding socially adaptive situation) at age 24 (Kvalsund and Bele 2010a, 2010b). SEN

students in upper secondary school who were received special educational provisions solely in special classes had a 3.4-fold greater risk of being in a small, isolating, and bonding social network at the beginning of adult life (Table 4). This effect was especially negative for females. Personal factors (language and communication difficulties, psychosocial difficulties, intellectual disabilities) and family situation (psycho-social stress) at the beginning of upper secondary school had no significant effect.

The logistic regression analyses of the 2007 data (T2), however, reveal that when the dependent variable still is 'being in a small social network or not,' the new set of life situation variables has a significant and dominant relative effect in explaining the young adults' potential for forming social relationships (Table 4). The odds ratio $\exp(B) = 2.238$ (p < .05) may be understood as indicating that young adults are more than 2.2-fold more likely to be in a small social network at the age of 29 if they do not 'have children/driver's license'. Compared to 2002 data, neither personal factors nor prior family situation nor prior school factors have any significant effect in explaining the likelihood that subjects in 2007 would be in a small spare time network in adult life (Table 4).

Separate *gender* analyses indicate that the chance is three times greater for young adult females to be in a small spare time network at the age of 29 if they do *not* have children or a driver's license ($\exp(B)=2.960$, p<.05), whereas the result was non-significant for young males although showing a positive relationship ($\exp(B)=1.435$). Although personal factors had a non-significant effect in 2002, it is significantly more likely for females with severe intellectual disabilities to be in a large network at the age of 29. This may be an indication of the close monitoring of people with severe intellectual

Table 4. Being socially marginalized or integrated in a small *strategically* formed network or not in early adult life (age 24) and in adulthood (age 29), affected by independent variables related to the beginning of upper secondary school and by life situation variables in adulthood (in 2007). Logistic regression.^a

	So margir In a	Social marginalization In a small network or not		7 (T2) ocial alization small ck or not
	Sign. Exp(B)		Sign. Exp(
Personal factors				
1. Language and communication difficulties	0.765	1.118	0.281	0.566
2. Psycho-social difficulties		0.787	0.540	1.384
3. Intellectual disabilities			0.087	0.510
Contextual factors				
I. Family situation Psycho-social stress in the family the start of upper secondary education	at 0.587	1.348	0.235	0.483
II. School situation Special class: Group of four at the start of upper secondary education.	0.000	3.425	0.654	0.859
III. Having changed life situation (Children/Driver's licens	se)		0.029	2.238

^aThe chance of being in a strategically formed network (<5 in 2007) or not in early adult life (2002, then <3, age 24, N=494) and in adulthood (2007, age 29, N=373). Logistic regression (p<.001, p<.05).

disabilities. Strangely, the effect is only significant for females. Only further qualitative research can provide more answers to this gender-related phenomenon.

Effects on spontaneously formed networks

At the age of 24 (2002 data, T1), results of logistic regression with 'being in a spontaneously formed network or not' (networks comprised solely of young persons of the same age) as a dependent variable indicated that personal factors, rather than contextual factors of family and school situation (all factors related to their situation at the beginning of upper secondary), had a significant effect on inclusion in a spontaneously formed network in early adulthood (see Kvalsund and Bele 2010b and Table 5 for more details). Furthermore, people with intellectual disabilities were half as likely to be in a spontaneous network (Table 5). The school variables had no significant effect on this dependent variable (ibid.). However, personal variables had different effects on each gender in separate gender analyses.⁸

In contrast to the 2002 data, the results of an equivalent logistic regression analysis at the age of 29 (2007, T2) with the same general model of variables, with 'being in a spontaneously formed network or not' as the dependent variable, indicate that personal factors are weak and have no significant effect (Table 5). However, at this point in the life course, the only independent variable that reflects the young adults' changed life situation, 'having children/driver's license or not', has a significant effect on being in a

Table 5. Being socially marginalized or integrated in a *spontaneously* formed network of persons of the same age or not in early adult life (age 24, T1) and in adulthood (age 29, T2), affected by independent variables related to the beginning of upper secondary school and by life situation variables in adulthood (in 2007). Logistic regression^a.

	2002	2 (T1)	200	7 (T2)
	Social marginalization In a spontaneously formed network or not		Social marginalization In a spontaneously formed network or not	
	Sign.	Exp(B)	Sign.	Exp(B)
Personal factors				
1. Language and communication difficulties	0.228	1.552	0.956	1.031
2. Psycho-social difficulties	0.008	2.842	0.774	1.166
3.Intellectual disabilities ³	0.003	2.330	0.735	1.166
Contextual factors				
I. Family situation . Psycho-social stress in the family at the start of upper secondary education	0.122	2.330	0.131	0.390
II. School situation Special class I: Group of four at the start of upper secondary education.	0.428	1.131	0.458	1.202
III. Having changed life situation (Children/Driver's license)	_	_	0.002	3.047

^aThe chance of being in a spontaneously formed network or not in early adult life (2002, age 24, N=494) and in adulthood (2007, age 29, N=373). Logistic regression (p<.01).

spontaneous network with other people of the same age (Exp(B)=3.047, p<.01; see Table 5). This finding demonstrates that people, who are *not* living together with children or have a driver's license, have three times greater chance of not being in a spontaneously formed network of people of the same age at this stage of the life course.

Separate analyses of 2007 data (age 29) for *gender* indicate that males are four times more likely not to be in a spontaneous network if they do *not* have children or a driver's license in young adulthood ($\exp(B)=4.137$, p<.01). Young females who meet these conditions are less than one-third as likely to be in a spontaneously formed network ($\exp(B)=3.109$, p<.052). The effect of personal factors based on gender seen in the 2002 data is not present in the 2007 data.

Discussion

Our aim was to study the changes in the distribution of social adaptive situations for vulnerable young adults in their late twenties (age 29), compared with the situation when they were in their early twenties (age 24). The results reveal that changed life-situation factors in adulthood have a resilient impact on individuals' patterns of social integration/marginalization.

The first network type concerns the more planned/strategically built social spare time networks (based on the question 'who are you usually together with during your spare time?'). This network type may consist of a few protective close family members and represent a rather restricted, internally oriented social situation that can be isolating. This small and close network is the planned network (by parents and/or public helper), and it is benefit-oriented in the sense that it tries to compensate for the young person's difficulties.

For network size and social integration in early adult life (age 24), attending special class in upper secondary school was the significantly explanatory variable, whereas personal and family variables did not provide explanatory power at this stage. Five years later (2007), the results of the logistic regression analyses reveal that the changed life situation variable covering the reflection and network building potential of work, family and mobility is the single most significant and substantial factor explaining network size in this network type. Thus, these factors are indicators that increase the potential that young adults will form relationships with others. Although we can see that the personal factor psycho-social difficulties reflects a positive relation to the size of this type of network (Exp(B)=1.384, it is non-significant), these time distant factors are weaker than more contemporary factors in 2007 (Table 4).

The negative effects of having been a special class student on the size of strategically built networks can be traced for several years after the young persons finished school. This is grave and negative consequence of differentiating the teaching and learning of SEN students into special classes/groups of four. However, the comparative analyses reveal that changes in context and life situation can compensate for these earlier effects of special class as a risk factor.

As for spontaneously formed networks at the age of 24, the results of the logistic regression of 2002 data revealed that the personal variables psycho-social difficulties and intellectual disabilities significantly explained the effects of being in this type of network. In 2002, we found differences in Exp(B) values in the two network types: high Exp(B) for special class experience in strategic and compensating networks (small but dense networks), and high Exp(B) for personal characteristics in spontaneously formed networks. However, at age 29, personal factors do not explain the likelihood of being in a spontaneous network. The stronger explanatory factor is the changed life situation

variable, which is associated with an increase in the potential for forming relationships. Separate analysis for gender yields an equal result, which is even more strongly indicated for males. The effect of personal factors for gender seen in the 2002 data is not found in the 2007 data.

Spare time networks immediately following upper secondary school are typically friendship oriented, implying that peer relations are particularly important, being of existential significance (see, e.g., Frønes 2002). Having a network of friends indicates that one is a 'normal' young person. However, in adulthood (age 29), participating in activities with people of the same age seems to be less important or relevant. The context of this type of network has changed profoundly. At this time of the life course, there are greater opportunities for young adults to form their own families, have a job, have children and have increased mobility. Social relationships in spontaneous networks have changed, particularly for those who have a partner and children, reflecting a different kind of network characteristics than five years earlier. Interaction with other adults in the same life situation, for example, interacting with other parents in activities such as baby-swimming or pram groups, is more important. Being in these contexts and situations increases the chances that young adults will develop social relationships with others.

The power of a changed life situation: agency in the borderland between individualistic and collectivistic life adaptation

In strategically planned and benefit-oriented networks, the vulnerable youth may be on their own within a network that is compensating for the person's lack of agency - a security- and support-oriented 'net'. These networks are different from those that are formed more spontaneously, where the young adult makes individual choices oriented towards maximum benefits. These spontaneous networks can be referred to as self-realizing and bridging arenas. The latter network type demands a different set of social skills from the young adult than being in a strategically and more formally formed network, such as agency, more social initiation and independent adaptation than is necessary with family. In some of these spontaneous networks, the adolescents may experience defeats when they are not managing to keep up with all the activities going on among peers. In this situation, they are on their own without a 'net' and have to face the risk and consequences of not being on the inside.

The transition to adulthood includes 'turning points' that bring the young adult into new roles (Elder and Giele 2009; George 2009). In this phase, new forms of social interaction patterns are related to processes of mobility for many young adults. The changed situational frames seem to make social adaptation easier for many vulnerable youth, making it more plausible for them to connect with others in their spare time. Elder, Johnson and Crosnoe (2006) state in their review of research that the initiation of new relationships can shape lives by fostering turning points that lead to change in behaviour. One important factor mentioned is changes in family relations, e.g., marriage and having a family of his own. This changed life situation increases the potential of relational forming social relationships. This is also the case for having a driver's license. And also for having work. All these variables are alike in the aspect that they are increasing the potential of forming relations. According to the frame factor theory, when the framing conditions are changed, this also implies a change in the processes for the actors within these conditions and, hence, the results are - in this case, social capital, social network relations and social integration (cf. Dahlöf 1971; Elder, Johnson, and Crosnoe 2006). This is the case particularly when having children, implying that both parents and children are initiating or are located by more persons. These factors of resilience overshadow the effect of having been a special class student, which was a risk factor for social adaptation in early adult life. Furthermore, the young adults are in the process of creating a new adult identity as well as forming new social relations reflecting the qualitative change in expectations and responsibility as adults and parents. The context and structural conditions of linked lives (Elder, Johnson, and Crosnoe 2006) have clearly changed and has been clearly accepted as a new collectively oriented base of agency in developing social networks.

From a perspective of life-course transitions, social changes over time are not only a consequence of the passage of time. Nonetheless, contemporary rather than time distant factors seem to have significant influence on social relationships in adulthood. However, the changes in the cultural context are the point of departure. The framing of daily life for people in their late twenties has changed dramatically for many of the young adults, influencing their patterns of social action in a powerful way. This is when people are forming their own families, participating in working life, establishing their own place to live, or driving a car. Some may have had a job but have later become dependent on social security. There is a transition density in this period (George 2003). In fact, all of these demographic changes are concentrated in this period far more than during other phases of life (Osgood et al. 2005). The events in this transition to adulthood have a significant impact on each young person's future, which is particularly challenging for vulnerable people.

The changes in life context for young people in their late twenties indicate a change in network characteristics. Referring to the typology of social adaptive networks (i.e., Kvalsund and Bele 2010a), the strategically formed networks seem to have changed from being supportive and compensating to becoming more caring and supporting (Figure 3, categories 3 and 4). The spontaneously formed networks also change when people are in their late twenties, becoming more collective and inclusive and fostering relationships (Figure 3, categories 5 and 6). In 2007 (T2), both types of network seem to be founded on the same content values (benefit-calculating, self-centred, individualistic, Figure 3, category 2a), although these values were different for the two network types immediately after upper secondary school. The difference consists of compensational benefit calculation (category 3) and self-realizational benefit calculation (category 5). The young adults' social relationships at the two points of time mirror a change of direction of the content of social situations encountered during leisure time: a displacement towards less ego-oriented and self-realizing behaviour and more altruistic social relations (Figure 3). This possible shift from self-realizing and individualistic actions towards more collective and altruistic actions implies more self-sacrifice in social relationships (Figure 3). Relational interactions with others are changing as a consequence of having responsibility for children, for example, through necessary contact with different institutions such as kindergartens and schools or being together with other parents. Furthermore, a driver's license makes the typical young adult more mobile, which is important for activities with children and family and for maintaining social relationships. Taken together, both for strategically and spontaneously formed networks, a more family-oriented context (having children) and greater mobility (driver's license) seem to redefine the norms or direction of normality in social life. The consequences of these changes are clearly resilient to the marginalization and social integration of formerly vulnerable youths. This change in content will be studied further using a new data collection completed in 2012.

According to the prevailing expectations of society that individuals should be competent actors (Giddens 1991), make their own choices and be self-sufficient⁹ (i.e.,

Figure 3. The changes of spare time networks from early adult life (age 24, T1) to adulthood (age 29, T2). CIV: causing independent variable(s).

Aakvaag 2008; see also Vetlesen 2009, 36), individualism is accentuated in a study of the sound bites 'freedom, choice, individuality'. This area of study also concerns how people develop their own identities by making rational choices (i.e., Lin 2001; Putnam 2000). Vulnerable young adults are also expected to be able to live their own lives (see, e.g., Ekeland 2009; Kvalsund 2007). These expectations are even more challenging for this group, raising an ethical dilemma about challenges for individuals such as vulnerable youth making them responsible for their own insufficiency. Those who do not manage independently fall into this category, because they are dependent on others, have made unwise choices, have not had sufficient foresight or have been irresponsible (Vetlesen 2009, 40). Nevertheless, as opposed to this individualistic ideology, we find another principle of value that emphasizes a more altruistic view of human relations (Nafstad and Blakar 2009; Nafstad 2004, 72–74): a good life and an individual's well-being is not only founded on a person's own interests, but as human beings, we are also social beings with a genuine interest in social solidarity, justice and community (Nafstad 2004).

Our comparative logistic regression analyses indicated changes in the weight of the explanatory variables indicating over time that it is too simplistic to reduce this change to a question about the freedom to make individual strategic choices of self-realization. However, the interaction between changes in the life situation and the altruistic dimension in the individual's agency encourages inclusion and promotes initiative for new relationships and expanded social networks with family as a collective grounding of

action rather than the person himself. This change may come from within an individual or from others that she or he meets in the new life situation. The change in life situation also correlates with the conditions of critical realism that this study is based on.

From the perspective of critical realism, within a broad and deep view of the complexity of reality (Bhaskar and Danermark 2006), it is essential to account for layered reality, in which an intransitive external reality exists independently of our consciousness of it (ibid.). In our analysis, not all parts of the reality are observable, but they still exist outside our minds, independent of our concepts and theories. According to Bhaskar (1975), some mechanisms (e.g., in this study restricted capability of relational network building within the frame of special class/group of four, which has consequences for later network building) are counteracted by other mechanisms (e.g., the chance to make social connections through work, family life, children and increased mobility), resulting in new effects (e.g., increased social adaptation). Therefore, the relative strength of risk mechanisms seems to be changed, because they interact with counter-mechanisms that work in the opposite direction, resulting in resilience. The perspective of a layered social reality, transitive and intransitive realms and explanatory mechanisms, suggests the importance of context; events take form within highly complex contexts, which change over time. In addition, events have already occurred. Therefore, by developing explanatory models, even with prospective data, we are re-constructing rather than constructing the relationship between variables, in accordance with frame-factor theoretical thinking (Kvalsund 1995; Dahlöf 1971). From the perspective of critical realism and the complexity of reality, we note that the explanatory variables used in our logistic regression analyses are only at the indicator level, and they do not capture the real world or express the complete complexity of any phenomenon. This complexity of the field indicates that we must speak of causal tendencies rather than reliable explanatory and causal relations between variables in the models.

Conclusion: further research

We want to emphasize that this longitudinal study has demonstrated that having been a special class student has significant negative consequences for the individuals several years after completing upper secondary school. Nevertheless, we realize that reflecting a changed, more collective base for the person's agency, she is able to change her own life situation to become more embedded in social communities later in life. This result should not be interpreted as indicating that concern about the challenges of attending special class is unnecessary. However, it reveals the power of individual agency when contexts and structures change and increase the potential for resilient building of social relationships.

In the last phase of this longitudinal research project, we plan to collect new qualitative data in the form of interviews with strategically selected sub-groups identified by analyses of our quantitative data sets. For example, we will be able to compare detailed stories from people who have children with those without children. We could also explore the experiences of people (retrospective perspective) who chose to drop out of upper secondary school to understand why and how that choice has affected their adult social networks. Studying the breakdown of the life trajectories and circular transitions of persons who move on and off social welfare is another relevant topic. This dimension will bring forward retrospective data in 2015, and together with our previous sets of prospective data, we hope that this will give us new and deeper knowledge of vulnerable youths' social adaptation in their transitions to adult life, whether they are isolated on

their own without a 'net', or as time passes by are included and on their own – within a network. Moreover, in the 2012 data collection, we also collected data concerning webbased social networks, i.e., using the so-called social media, which may have a compensatory – or possibly and alternatively a negative reinforcing – potential compared to a face-to-face network of relationships.

Notes

- 1. Totally, thirteen categories of disabilities/difficulties were identified (also used by Skårbrevik 1996), but restricted to the four mentioned in the present study. The other nine categories were sight, hearing, moving disabilities, motor coordination, speech/articulation, reading and writing disabilities, dyscalculia, concentration difficulties and medical problems.
- 2. In our model, in the logistic regression analysis, this is given the variable value 0, related to small networks. The second variable value is 1, related to large networks.
- 3. Myklebust, et al. (2012).
- 4. For a quick overview, see also Figure 1.
- 5. See the end note 1.
- The results of an intensive analysis of qualitative data are reported in Kvalsund et al. (1998; Kvalsund 1999, 2004a, 2002).
- 7. This includes both having own children and living together with children.
- 8. For females (age 24) with intellectual disabilities, the probability of not becoming a member of a network comprised solely of young adults at the same age was 4.6-fold greater than for those without. For males with language and communication difficulties or psycho-social difficulties at the beginning of upper secondary school, there was a 4.6-fold greater chance of not being in a spontaneously formed network in early adult life.
- 9. For a unified perspective on theory of contemporary society, see Aakvaag (2008).

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