

# Measures of Social Isolation

Diego Zavaleta<sup>1</sup> · Kim Samuel<sup>2</sup> · China T. Mills<sup>3</sup>

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**Abstract** Social isolation is a deprivation of social connectedness. It is a crucial aspect that continues to be named by people as a core impediment for achieving well-being and as a relevant factor for understanding poverty. However it is not routinely included in surveys that provide data on multidimensional poverty measurement. Although the challenge of measuring social connectedness is daunting, this paper argues that existing research in several fields provides solid ground for the construction of basic internationally comparable indicators that measure specific aspects of social isolation. In particular, this paper synthesises the relevant literature on the measurement of social isolation and related phenomena, and on the basis of this synthetic review, proposes a module of indicators to measure social connectedness that could be feasibly incorporated into an internationally comparable multi-topic household survey.

**Keywords** Social indicators · Social connectedness · Social isolation · Relational poverty · Multidimensional poverty · Personal relations

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✉ Diego Zavaleta  
Diego.zavaleta@qeh.ox.ac.uk

Kim Samuel  
ksj@samuel.com

China T. Mills  
china.mills@sheffield.ac.uk

<sup>1</sup> Oxford Poverty and Human Development Initiative (OPHI), University of Oxford, 3 Mansfield Road, Oxford OX1 3TB, UK

<sup>2</sup> Institute for the Study of International Development (ISID), McGill University, Montreal, Canada

<sup>3</sup> Critical Educational Psychology, School of Education, University of Sheffield, Sheffield, UK

## 1 Introduction

In a recent debate on ‘Measuring National Well-being’, people in the United Kingdom were prompted to consider the question of what mattered most for understanding well-being. One of the aspects that participants considered to be most important was ‘personal relationships’ (Office for National Statistics 2011). Similarly, studies such as *The Voices of the Poor*, conducted in 60 developing countries, have found that people living in absolute poverty consider ‘social isolation’ to be a relevant aspect in their understanding of poverty (Narayan et al. 2000). Former French President, Nicholas Sarkozy, convened a commission to identify the limits of current indicators of economic performance and social progress, and to suggest how to improve them for all countries, with a primary focus on Europe. The commission, led by Nobel Prize winners Joseph Stiglitz and Amartya Sen, and French economist Jean Paul Fitoussi, concluded that ‘social connections and relationships’ should be among the dimensions taken into account for measurement of quality of life globally. Moreover, they argue that social connections should be considered *simultaneously* alongside other dimensions such as material living standard (income, consumption and wealth); health; education; personal activities, including work; political voice and governance; environment (present and future conditions); and insecurity (of an economic as well as physical nature; Stiglitz et al. 2009).<sup>1</sup> These local and global initiatives (spanning the developing and developed world) attest to the importance that human beings place on social relations in the evaluation of their wellbeing, alongside other dimensions of life. They reflect, as well, the acknowledged gap between what people value and the dimensions currently used for assessing the wellbeing of people.

If indeed, social connectedness is a key dimension of poverty and of well-being, and should be considered alongside these other dimensions, then the routine surveys used to analyse well-being and poverty will need to include modules of social connectedness. However at present no agreement exists as to what such modules might include. This paper tackles that question.

In particular this paper reviews the measurement of aspects of social connectedness in a diverse set of literatures.<sup>2</sup> On the basis of that analysis, we propose a series of indicators to capture internationally comparable data on social connectedness. This will allow for the production of a fuller assessment of a person’s social connectedness by generating

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<sup>1</sup> These are only some examples of a number of initiatives exploring aspects of social connectedness. See, for example, the Benessere Equo e Sostenibile initiative in Italy (<http://www.misuredelbenessere.it>), the New Zealand Social Report (<http://socialreport.msd.govt.nz>), The Minnesota Project (Minnesota Department of Health 2010), the Working Group on Social Isolation of the Province of British Columbia in Canada (Keefe et al. 2006), and the work on social isolation by the New South Wales Department of Disability, Ageing and Home Care in Australia (Fine and Spencer 2009). In Italy, for example, people indicated, through participatory exercises, that good relationships with friends and relatives were as important as having an adequate income. Relationships were considered by respondents to be among the top contributors to life and well-being, ranking behind only good health, guaranteeing the economic and social future of children, and having decent satisfying work.

<sup>2</sup> The subject of social isolation has been addressed by an array of literatures from different disciplines. This analysis is rooted in economic theory and research. The economic lens we draw upon has a number of limitations, and can be criticised for being overly reductionist, specifically through reducing the social, cultural and psychological complexity of social connections to their instrumental explanations. As far as possible, to avoid this reductionism, we have drawn upon rich analyses from social psychology, sociology, anthropology and philosophy. Yet the richness of the literature makes it impossible to review and address all, forcing us to overlook other strong theories. We are also approaching the subject with a very concrete objective (proposing indicators apt for large surveys) that forces us to leave behind solid yet unfeasible measurement instruments for this particular objective. We welcome any suggestion to enrich this selection.

information on some of the multiple aspects that affect his or her social relations. These indicators could be included in standard household surveys to increase insights about multidimensional poverty by showing the joint distribution of deprivations in poverty and social connectedness for the same person. Furthermore, specific hypotheses, such as the links between health outcomes and social isolation, or its relevance for the understanding of absolute poverty, can also be tested. Unlike much of the current research on this topic, this paper will emphasise the use of indicators suitable for developing countries.<sup>3</sup>

## 2 Approach and Definition

The challenge of measuring social connectedness is daunting. A linked paper, by the same authors, has reviewed and synthesised the vast and diverse conceptual literature on social isolation. In that paper we also identified the multiplicities of aspects of social connectedness such as different types of relations, their quality, where they take place, or the norms governing these relations. This paper follows on from that in-depth review, and builds upon the insights there gathered. Yet this paper, like that, observes that attempts at measuring this phenomenon have arisen in many disciplines and in relation to many different social problems, and in many different contexts. Consequently, this paper joins a very unsettled debate on the measurement of social connections (see Stiglitz et al. 2009; Stone 2001; OECD 2011).

Yet we argue that existing research in several fields provides solid ground for the construction of basic internationally comparable indicators that measure specific aspects of social isolation. The social capital, social exclusion and social cohesion literatures, for example, provide insightful observations about relational deprivations, as well as experiences in measuring these aspects. In turn, psychological theories of loneliness and the literature on quality of life prioritise people's own assessments about their situation regarding social connectedness. Furthermore, multidisciplinary and specific national experiences provide accounts of comprehensive studies that have used objective and subjective indicators to attempt to gain a richer understanding of this phenomenon.

This paper follows four guiding principles. First, and as with other exercises within the Oxford Poverty and Human Development Initiative (OPHI)'s Missing Dimensions of Poverty Data program, this paper builds exclusively on indicators that have been previously tested and found to give rise to data that can be analysed in rigorous academic published work. Thus, all the proposed indicators come from an array of different literatures and have been previously implemented, although not necessarily in developing countries. Second, the indicators have been chosen to obtain specific information about aspects of social connectedness, as well as to be used in conjunction with other variables. This will allow researchers to establish the relationship between different aspects of isolation, as well as between aspects of isolation and other dimensions relevant for poverty analysis, such as empowerment or income. Third, the proposed indicators seek to advance understanding of social isolation and how it manifests in each of the different levels involved in the social connectivity of a person. For this, the definition used in this paper follows the suggestions for the measurement of social connections set out by the Organisation for Economic Co-operation and Development (OECD) (2011). Finally, it

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<sup>3</sup> Currently, much of the literature is based on the European, Australian, New Zealand, or North American contexts.

seeks to incorporate direct measures of social connectedness, including people's own internal evaluations of their social relationships. This follows the recommendation by the Commission on the Measurement of Economic Performance and Social Progress that meaningful indicators of social connections need to move away from proxy measures to rely on surveys of peoples' actual behaviours and activities (Stiglitz et al. 2009).

## 2.1 Definition of Social Isolation

Elsewhere we have defined social isolation as the inadequate quality and quantity of *social relations* with other people at the different levels where human interaction takes place (individual, group, community and the larger social environment). We drew attention to the fact that social isolation concerns the quantity of social relations (the number or frequency of interactions with another individual or individuals) and the quality of social relations—whether it satisfies a person's internal standards and is of intrinsic value, and whether it is of instrumental value. We observed that measuring social isolation is challenging because there is no automatic relationship between these quantitative and qualitative aspects and feelings of social connectedness; many factors intervene. We observed the need to consider internal and external perspectives, to observe human interactions at different levels (individual, group, community, and larger social environment).

It is also worth signalling at this point, due to the empirical literature using the title isolation, that social isolation is distinct from the isolation of groups and communities due to group characteristics or geographical/physical location. Econometric analysis by Fafchamps and Shilpi (2008), for example, demonstrates that geographic isolation (often due to inaccessible roads), in Nepal, is associated with lower subjective welfare (using the perception of the adequacy of the household total income as a proxy for subjective welfare). Drawing upon participatory work on poverty in parts of rural Colombia, McGee (1998) explains that the physical isolation associated with living somewhere remote and ill-served by infrastructure may at times make 'people feel that their communities' physical isolation permits the authorities to neglect them with impunity; in turn, neglect on the part of the authorities compounds local peoples' sense of being abandoned and ostracized' (cited in Brock 1999, p. 34). McGee observes, 'even within villages, the worst off are physically isolated: many respondents observed that the poorest and most marginalised are those who are never seen or heard' and that 'isolation has the greatest impact on the poor, whose mobility is often already restricted' (Brock 1999, pp. 34–53). Yet the isolation of groups, and/or geographical isolation, may not be synonymous with lack of social interaction. It may conversely produce the experience of 'being alone together' (Suedfeld 1974, p. 1) while being isolated from other groups and/or wider society.

## 3 Survey of Measures Related to Social Isolation

Phenomena related to social isolation have been the topic of many empirical studies. Some of these have sought to measure social interactions. This body of studies use a great diversity of keywords, and engage a vast literature and array of disciplinary tools. This section surveys key measurement tools organised according to the concept they sought to measure.

### 3.1 Social Capital, Social Cohesion, Social Exclusion, and Psychological Approaches

The literature on social capital points to the relevance of social connectivity with family, groups, and community, and to the importance of the rules that govern this connectivity.<sup>4</sup>

In terms of measurement, a relevant experience in measuring social capital for the purpose of this paper (due to its focus on comparable indicators and aim at being applicable in developing countries) is the Integrated Questionnaire for the Measurement of Social Capital (SC-IQ) produced by The World Bank's Social Capital Thematic Group (Grootaert et al. 2004).<sup>5</sup> The questionnaire provides a set of survey questions arranged into six broad sections, namely, (1) Groups and Networks; (2) Trust and Solidarity; (3) Collective Action and Cooperation; (4) Information and Communication; (5) Social Cohesion and Inclusion; and (6) Empowerment and Political Action.<sup>6</sup> These sections aim to address different dimensions of social capital (both structural and cognitive—points 1 and 2, respectively), some of the main ways in which social capital operates (3 and 4), and some major outcomes (5 and 6). These questions were designed to generate quantitative data on various dimensions of social capital as part of a larger household survey. An advantage of this survey is that all of its questions have been drawn from previous surveys and are argued to have demonstrated reliability, validity, and usefulness. However, as the authors point out, the questionnaire has been designed within a conceptual framework of social capital based at the household level and thus relevant issues at other levels have not been included.<sup>7</sup> Despite these rich attempts, measuring social capital remains a highly unsettled matter.<sup>8</sup>

A related literature to social capital is that of social cohesion: 'the processes of building shared values and communities of interpretation, reducing disparities in wealth and income, and generally enabling people to have a sense that they are engaged in a common enterprise, facing shared challenges, and that they are members of the same community' (Rosell et al. cited in Maxwell 1996, p. 13). The measurement of social cohesion, like that of social capital, remains a debated topic. Attempts at operationalizing the concept have

<sup>4</sup> For a discussion regarding the emphasis on the instrumental value of relationships and the idea behind the term 'capital' in these theories, see Zavaleta et al. (2014).

<sup>5</sup> Several countries have dedicated surveys on social capital developed for their own contexts, including the United Kingdom, Australia, Canada, Ireland, the Netherlands, and the United States. There are also important initiatives by the OECD and several national statistics offices advocating for the harmonisation of social capital indicators (see for example, Healy 2002). The study by Grootaert et al. (2004) is, to the knowledge of these authors, the largest study attempting to develop internationally comparable indicators on social capital. Its emphasis on developing countries—the questionnaire builds on studies carried in Bolivia, Burkina Faso, Ghana, Guatemala, Indonesia, Tanzania, and Uganda—and the objective of making these indicators usable for a multi-topic household survey makes this experience particularly relevant for this study. Unfortunately, the questionnaire has been only piloted in Albania and Nigeria and thus there is no evaluation of its relevance. For a discussion on practical guidelines for measuring social capital in low-income countries using the SC-IQ see Jones and Woolcock (2007).

<sup>6</sup> The list of the suggested most essential questionnaire items is provided in Appendix 1 of Zavaleta et al. (2014).

<sup>7</sup> See also Healy (2002) for a discussion on measuring social capital at the international level, and Harper and Kelly (2003) for a discussion on measuring social capital in the United Kingdom.

<sup>8</sup> See, for example, Adam and Roncevic (2003), Durlauf and Fafchamps (2004), Foxton and Jones (2011), Grootaert (1998), Lochner et al. (1999), Moore et al. (2011), OECD (2011), Putnam (2001), Stiglitz et al. (2009), and Stone (2001). The Commission on the Measurement of Economic Performance and Social Progress, for example, recognises this problem and calls for more work on the development of solid indicators for measuring social connectedness. It provides, as reference, a list of questions used in the US. The list of these suggested questionnaire items can be found in Appendix 2, Zavaleta et al. (2014).

been limited by the shortage of working definitions and have adopted multiple forms, such as the elaboration of macro indices (Acket et al. 2011), specific aspects of social cohesion—e.g., neighbourhood cohesion—(Kim et al. 2013; Cagney et al. 2009; Stafford et al. 2003), or more instrumental and narrow definitions in which the richness of the concept gets diffused (see for example, Easterly et al. 2006).

Another literature that has explored the question of social isolation is that of social exclusion, in which there have been some innovative attempts to create direct indicators. One such example is the Poverty and Social Exclusion Survey of Britain (PSE). This comprehensive survey aimed at establishing the number of people suffering from exclusion by distinguishing between four dimensions: impoverishment or exclusion from adequate income or resources; labour market exclusion; service exclusion; and exclusion from social relations (Gordon et al. 2000, 2013). Exclusion from social relations, in particular, is a relevant domain as it seeks direct information about social relations and social participation by exploring different angles, including, (1) non-participation in common social activities; (2) isolation; (3) lack of support; and (4) disengagement and confinement.

A rich psychological literature addresses various aspects of social connectedness, such as the research on loneliness, also known as *subjective social isolation*, and on specific theories of quality of life.<sup>9</sup> In terms of measurement, the use of psychometric scales in specific contexts and clinical trials for measuring loneliness is well established (more on this, below). However, there are only a few examples of using these scales in large surveys. An interesting example in which a loneliness scale has been used for cross-country comparisons is provided by de Jong Gierveld and Van Tilburg (2010). In a seven country study, including France, Germany, the Netherlands, Russia, Bulgaria, Georgia, and Japan, with surveys sizes varying between 8158 and 12,828, these authors found that emotional and social loneliness can be measured using a six-item scale (three items measuring emotional loneliness and three items measuring social loneliness). One of the findings of the study is that the association between emotional and social loneliness proved to be significantly related to a shortage of resources in both younger and older adults.

### 3.2 Cross-National and National Experiences

Both nationally and internationally, there have been interesting attempts to evaluate social connections. The OECD (2011), for example, uses four indicators from the social capital literature to provide a glimpse into ‘social connections’: (1) social network support, (2) frequency of social contact, (3) time spent volunteering, and (4) trust in others. These indicators were selected due to their capacity to inform analysts about both informal and formal types of social connections (1 and 2, respectively) and as measures of important individual and societal outcomes (3 and 4). Unfortunately, due to the lack of a single data source that encompasses all four indicators, data for each indicator must come from different sources, thus preventing an analysis of the situation of the same person vis-à-vis these four aspects.<sup>10</sup> In turn, the UK’s Office for National Statistics (ONS) has been exploring the following domains as part of its Measuring National Well-being Programme: personal relationships and loneliness, family relationships, friendships, and community

<sup>9</sup> See, for example, Hawkey and Cacioppo (2009, 2010).

<sup>10</sup> The OECD distinguishes between headline indicators (most of which come from official statistics) and secondary indicators. The indicator on Social Network Support has been selected by the OECD to be its headline indicator for the ‘social connections’ dimension of well-being. Data for this indicator comes from the Gallup World Poll. See OECD (2011) for a discussion on this.

(see Table 1 for the indicators used) (Self et al. 2012). As with the exercise advanced by the OECD, data for these indicators come from different survey instruments, making it impossible to assess the overall level of connectivity of a single individual.

Finally, New Zealand's *Social Report* provides an interesting example of a national government using a mixture of social capital and subjective social isolation indicators to assess the state of social connectedness in the country.<sup>11</sup> This report, published since 2001, blends a series of social indicators with economic and environmental variables to provide information on progress in outcomes, changes over time, and group differences in social outcomes.<sup>12</sup> The report contains data on ten domains: (1) health, (2) knowledge and skills, (3) paid work, (4) economic standard of living, (5) civil and political rights, (6) cultural identity, (7) leisure and recreation, (8) safety, (9) *social connectedness*, and (10) life satisfaction. The report defines social connectedness as 'the relationships that people have with others and the benefits these relationships can bring to the individual as well as to society' (New Zealand Ministry of Social Development 2010, p. 110). It reports five commonly used indicators from the social capital literature with a concrete question on subjective isolation to measure social connectedness.<sup>13</sup>

The social connectedness section of New Zealand's *Social Report* is an extremely interesting example of an attempt to combine external and internal indicators in order to achieve a fuller assessment of the level and ultimate quality of social connectedness of an individual. However, there are three problems with this conceptualisation and measurement in regards to using this experience to generate internationally comparable indicators. First, as with other exercises of this type, lack of data availability results in the use of multiple data sources for the different indicators, including using surveys from different years (some of them with considerable gaps; Cotterell and Crothers 2011). This renders it impossible to analyse the situation of a person in each one of these aspects at the same time. Second, some of the external indicators used (such as telephone and Internet access in the home) would need to be adjusted in order to reflect different levels of development and to account for urban/rural differences relevant to developing areas of the world. Third, the direct use of the term 'isolated' in questions attempting to capture data on this state may be problematic.<sup>14</sup>

### 3.3 Poverty and Social Isolation

Empirical studies explore various specific links between poverty and different aspects of social isolation, including living in a poor neighbourhood and access to social resources (Tigges et al. 1998); links between low income, greater isolation, and a lower sense of

<sup>11</sup> See Cotterell and Crothers (2011) for a discussion on the evolution of social indicators in New Zealand and the conception of this report.

<sup>12</sup> See New Zealand Ministry of Social Development (2010) (<http://socialreport.msd.govt.nz>).

<sup>13</sup> The indicators are: (1) telephone and Internet access in the home; (2) contact with family and friends; (3) contact between young people and their parents; (4) trust in others; (5) loneliness; and (6) voluntary work.

<sup>14</sup> The actual question reads as following: 'Some people say they feel isolated from the people around them while others say they don't. They might feel isolated even though they see family or friends every day. In the last four weeks, how often have you felt isolated from others?' The use of the specific term in questions enquiring about these types of states is often criticised. For example, discussing the use of the term 'loneliness' in questions attempting to assess this state, Rook (1988) argues that while the term is meaningful to many people, it is also a fuzzy concept with multiple meanings. This may result in a strong reporting error. Moreover, the attached stigma to feelings of loneliness may prevent some older people from reporting it (Rotenberg and MacKie 1999; Victor et al. 2000).



**Table 1** Potential domains and indicators for assessing relationships: ONS

Personal relationships	Satisfaction with personal relationships Perception of loneliness <sup>a</sup>
Family relationships	Time spent with family every day or most days during the last two weeks Satisfaction with spouse or partner Self-report of partnership as being extremely happy or perfect Satisfaction with the well-being of own children Frequency with which children quarrel with their parents
Friendships	Time spent together with friends Satisfaction with relationship with friends Satisfaction with social life Communication method for making contact with friends to arrange a meeting Intensity of social networking
Community	Trust Feeling of belonging to own neighbourhood Participation in group activities Mixing socially with people from different ethnic or religious backgrounds in a range of settings (excluding at home) Satisfaction with people you work with Perception of relationships between managers and employees

Source based on Self et al. (2012)

<sup>a</sup> Measured by asking the question: 'How lonely do you feel in daily life'?

belonging, which also affects the perceptions and experiences of stigmatization and isolation for those who live on a low income (Stewart et al. 2009); and the effect of social resources and different norms on economic outcomes (Grootaert 1998). These studies are also relevant for measurement design, because they draw attention away from simply counting numbers of social contacts.

For example, while more frequent contact may imply strong ties with other people, according to Granovetter (1973, 1982), such strong ties tend to involve a high concentration of energy that serves to fragment communities of the poor into units that have little connection between groups. For example, using data from household surveys in Atlanta, Tigges et al. (1998) measured the extent of social contact by (a) whether the respondents lived with another adult and (b) the presence and number of 'discussion partners'—whether the person has someone outside the home to talk to about things that are important to them.<sup>15</sup> Documenting the socioeconomic characteristics of the discussion partners enabled the researchers to compare the networks of low- and high-income households, not only in number but also in who made up the discussion partners. Tigges et al. (1998, pp. 70–71) found that 'living in a concentrated poverty neighbourhood reduces by one-half the probability of having a close tie compared with living in low-poverty neighbourhoods', leading them to conclude that 'the poor, who are in greatest need of resources provided by social ties, tend to have smaller and less diverse networks' (Tigges et al. 1998, p. 55; see

<sup>15</sup> The researchers asked people, 'From time to time, most people discuss important matters with other people. Looking back over the last six months, who are the people, other than people living in your household, with whom you discussed matters important to you?' (Tigges et al. 1998, p. 58).



also Fischer 1982). Furthermore, Campbell and Barrett (1992) have found that people with higher incomes tend to have more extensive networks, while those with lower incomes have more frequent contact with a smaller network. From such research it would seem that weak ties between diverse groups can have a stronger cohesive power than strong ties within a smaller and more homogenous group.

Moreover, the diversity of these networks (the characteristics of the people who make up a person's social network) is of central importance. Wilson (1987) suggests that having close ties to people who are employed and who have a college education helps people to be tied into social resources that reduce social isolation (such as job networks and information about services). But, Stewart et al. (2009) found that people with lower incomes tended to affiliate more, and experience a stronger sense of belonging with, people in a similar economically marginalized situation; and Tigges et al. (1998, p. 71) found that 'living in a high-poverty neighbourhood decreases the likelihood of having an employed close tie by 57 %'.

The sociological literature on social isolation allows a move beyond the simplistic divide between subjective/objective isolation by exploring 'how norms, attitudes, cultural repertoires, meaning making, decision making and behaviours are developed, perpetuated, and reinforced through social participation in highly restrictive and insulated social settings' (Quane and Wilson 2012, pp. 1–2). This draws attention to 'how individual agency engages with the restricted range of social and structural constraints in socially isolated ... neighbourhoods', making conceptual links between the social isolation and socialisation of the inner-city poor (*ibid*, p. 1). In line with this, Tigges et al. (1998, pp. 70–72) demonstrate that 'neighbourhood poverty has a consistent negative effect on African Americans' social contacts' and 'an independent effect on social isolation and access to social resources' (with racial isolation interconnecting with this). This calls attention to the structural factors affecting social isolation (such as lack of employment, education, and transport) and how poverty may exacerbate social isolation, just as social isolation may increase the likelihood of living in poverty. Similarly, in a survey by the mental health charity MIND (2004), poverty, and specifically a lack of transport and poor housing, was rated as a major cause of isolation by over a third of respondents with mental health problems (p. 11). Klinenberg's (2001) ethnographic account of 'dying alone' in Chicago further illuminates the part played by poverty in both the lived experience and social production of isolation, and 'the demographic, cultural and political conditions that constitute the wider social context in which social isolation emerges' (p. 507). Furthermore, Stewart et al. (2009, p. 186) found that over half of the people they interviewed who lived on low incomes distanced themselves from others when social activities required financial capital, or if they feared stigmatization due to their low income, leading the researchers to conclude that 'the stresses of living on a low income also could result in self-isolation'.

The sociological and ethnographic literature on the varying and multiple relationships between social isolation and poverty in diverse contexts, alongside participatory work on poverty in developing countries (Narayan et al. 2000; Brock 1999), are important for various reasons. First, they enable conceptualization of *what it is* that people (and particularly poor people) may be isolated from and why this matters within poverty analysis. Second, they allow exploration of the links between intangible and tangible aspects of isolation (for example, how less quantifiable feelings of isolation interconnect with more tangible experiences, such as lack of resources; Brock 1999). Third, this literature highlights methodological issues in measuring isolation by pointing out that because people who are isolated have few ties to informal or formal support networks they are, within

survey tools, ‘among the social types most likely to be uncounted or undercounted’ (Klinenberg 2001, p. 506). This leads to a lack of systematic data on the extent of isolation in the general population and means that the prevalence of isolation is often underestimated. Finally, these rich literatures ensure that the measurement of social isolation is not isolated from relational practices and local contexts of meaning making and power relations—highlighting its ‘grounded complexity’ and preventing an understanding of social isolation that is overly abstract and broad (a major critique that is levelled at social capital; du Toit et al. 2007, p. 533).

## 4 Potential Indicators

Buiding on this review of measures related to social isolation and related concepts, this section describes a set of potential indicators to provide quantitative data on social connectedness. The selection of indicators followed the guiding principle of drawing upon the domains and indicators tested and found reliable by other major initiatives. Table 2 provides a summary of different initiatives to gather data on aspects of social connectedness. In particular, it follows the recommendations by the Commission on the Measurement of Economic Performance and Social Progress regarding indicators of social connectedness (the list of questions on social connections used in the US provided as an example by the report can be found in Appendix 2 of Zavaleta et al. (2014). After thorough testing, these questions have been found reliable, intelligible, and inoffensive (Stiglitz et al. 2009). However, the Commission recognises that social connections go beyond these particular aspects and suggests also exploring social trust, social isolation, informal support, workplace engagement, religious engagement, and bridging social capital. It also follows the OECD’s position regarding indicators on social connections: ‘Ideally, a set of indicators of social connections should describe a range of different relationships, as well as the quality of those relationships and the resulting outcomes for people (i.e., emotional and financial support, job opportunities, social isolation) and for society (i.e., trust in others, tolerance, democratic participation, civic engagement)’ (2011, p. 172).

The selection of potential indicators put forward in this paper applied these recommendations. The proposed indicators draw on several of the examples employed by the initiatives discussed throughout this paper, exploring different levels of social relationships (personal, family, friendship, and community) and a diversity of the suggested domains, such as trust and informal support. More importantly, wherever possible this paper privileges the use of direct measures of connectedness over the use of proxies. This exploratory module will allow testing of these indicators and an exploration of their usefulness with respect to the concept of social connectedness mapped in this paper.

This paper suggests the following domains as a basis for developing indicators for measuring social isolation:

a. External social isolation.

1. Frequency of social contact.
2. Social network support.
3. Presence of a discussion partner.
4. Reciprocity and volunteering.

**Table 2** Different initiatives on social connectedness

	The World Bank's SC-IQ <sup>a</sup>	Commission on the Measurement of Economic Performance and Social Progress <sup>b</sup>	OECD <sup>c</sup>	Office of National Statistics UK <sup>d</sup>	New Zealand's Social Report <sup>e</sup>	Hortulanus, R., Machielsse, A. and Meeuwesen, L. <sup>f</sup>	Misure del benessere <sup>g</sup>	The Poverty and Social Exclusion Survey of Britain <sup>h</sup>
Satisfaction with personal relationships				X				
Satisfaction with social life				X				
Satisfaction with spouse or partner				X				
Satisfaction with family				X			X	
Satisfaction with friends				X			X	
Satisfaction with people you work with				X				
Self-report of partnership as being extremely happy or perfect				X				
Frequency of contact with family		X		X	X			X
Frequency of contact with friends		X		X	X			X
Frequency of contact with neighbours		X						
Number of close friends/friends	X	X						
Relationship with children/youth				X	X		X	
Social network support	X	X		X			X	X
Feeling of belonging to own neighbourhood				X				
Loneliness				X	X			
Free aid data								
Social participation								
Volunteering		X			X		X	
Provision of unpaid aid							X	
Donating funds to associations		X					X	
Number of non-profit organizations							X	
Number of social cooperatives							X	

Table 2 continued

	The World Bank's SC-IQ <sup>a</sup>	Commission on the Measurement of Economic Progress <sup>b</sup>	OECD <sup>c</sup>	Office of National Statistics UK <sup>d</sup>	New Zealand's Social Report <sup>e</sup>	Hortulanus, R., Machielsse, A. and Meeuwesen, L. <sup>f</sup>	Misure del benessere <sup>g</sup>	The Poverty and Social Exclusion Survey of Britain <sup>h</sup>
Participation in groups	X	X					X	
Non-participation in common social activities								X
Confinement								X
Reciprocity/solidarity/cooperation	X	X						
Trust	X	X	X	X	X		X	
Trust in workmates		X						
Religious engagement		X						
Access to communication methods/ preferred method for making contact with friends to arrange a meeting	X	X		X	X			
Intensity of social networking				X				
Participation in group activities				X				
Collective action	X							
Mixing socially with people from different ethnic or religious backgrounds in a range of settings (excluding at home)		X		X				
Perception of relationships between managers and employees				X				
Emotional support								X
Instrumental support								X
Social companionship								X
Existence of other significant persons								X
Actual support received								X

Table 2 continued

	The World Bank's SC-IQ <sup>a</sup>	Commission on the Measurement of Economic Progress <sup>b</sup>	OECD <sup>c</sup>	Office of National Statistics UK <sup>d</sup>	New Zealand's Social Report <sup>e</sup>	Hortulanus, R., Machielsse, A. and Meeuwesen, L. <sup>f</sup>	Misure del benessere <sup>g</sup>	The Poverty and Social Exclusion Survey of Britain <sup>h</sup>
Actual support given						X		
Changes in network size						X		
Sources of protection						X		
Social isolation risk factors						X		
Happiness	X							
Sources of information	X	X						
Social cohesion	X							
Physical safety	X							X
Empowerment	X							
Political participation/civic engagement	X	X					X	X

<sup>a</sup> Grootaert et al. (2004)<sup>b</sup> Stiglitz et al. (2009)<sup>c</sup> OECD (2011)<sup>d</sup> Self et al. (2012)<sup>e</sup> See [http://www.stats.govt.nz/surveys\\_and\\_methods/a-z-of-our-surveys/general-social-survey/nzgss-questionnaires.aspx](http://www.stats.govt.nz/surveys_and_methods/a-z-of-our-surveys/general-social-survey/nzgss-questionnaires.aspx)<sup>f</sup> Hortulanus et al. (2006)<sup>g</sup> See <http://www.misuredelbenessere.it><sup>h</sup> Gordon et al. (2000)

b. Internal social isolation.

1. Satisfaction with social relations.
2. Need for relatedness.
3. Feeling of belonging to own neighbourhood/village/community.
4. Loneliness.
5. Trust.

This paper proposes the use of three proxies to capture data on external isolation: (1) Frequency of social contact, (2) Social network support, and (3) Reciprocity and volunteering. Frequency of social contact has strong links with well-being, allows estimation of the level of objective social isolation, and is a proxy for meaningful relations (Kahneman and Krueger 2006; Krueger et al. 2009; Stiglitz et al. 2009). This paper proposes to capture data on two aspects: frequency of contact with family (proposed by OECD 2011)<sup>16</sup> and frequency of contact with friends (used in the PSE survey in Britain).

In turn, social network support provides an approximation of the existence (or perceived existence) of supportive relationships. This support can have intrinsic value for a person (such as emotional support or sense of security) and/or instrumental value (e.g., help financially to overcome a crisis). The indicator selected for this domain is from the Gallup World Poll (OECD 2011) but includes a follow-up question in line with the suggestion from Stiglitz et al. (2009).

Much research emphasises the importance of having a close friend or discussant with whom to discuss important matters. A number of studies use this as a measure of the extent of a person's social contacts, the meaningfulness of those contacts, and the size of a person's social network (see for example, Harper and Kelly 2003; Tigges et al. 1998; Van Tilburg et al. 1991). This paper proposes to capture data on the presence of a discussion partner by borrowing a question from the European Social Survey Round 5 (2010).<sup>17</sup>

Although related, reciprocity and volunteering demand several indicators due to their particularities and complexities. Despite being the 'touchstone' of social capital, reciprocity remains under-theorized and rarely measured, partly because it is difficult to summarise in a simple question (Abbott and Freeth 2008), and also because norms of reciprocity are complicated to operationalise (Hyypä 2010).<sup>18</sup> Attempts to measure reciprocity have often centred on perceived helpfulness of others.<sup>19</sup> However, Abbott and

<sup>16</sup> A discussion on the statistical quality of the indicators proposed by the OECD can be found in OECD (2011, p. 173).

<sup>17</sup> see <http://www.europeansocialsurvey.org>.

<sup>18</sup> The relevance of reciprocity within the social capital literature resides in the potential that giving and receiving may have on enhancing a person's ability to gain access to power or resources, or to increase the level and efficiency of production. This is an instrumental value of personal exchanges yet quite limited for describing the quality of relational engagements. An alternative form of measuring the relevance of this exchange but with an emphasis on its intrinsic value is provided by psychological theories of mutuality, relationality, or interdependency, among others. Mutuality, for example, refers to 'the bidirectional movement of feelings, thoughts, and activity between persons in relationships, but its common usage is circumscribed by notions of social exchange' (Genero et al. 1992, p. 36; see the same authors for a measure proposal for perceived mutuality in close relationships).

<sup>19</sup> Kawachi et al., for example, asked participants: 'Would you say that most of the time people try to be helpful, or are they mostly looking out for themselves?' (1997, p. 1492). In turn, Pollack and von dem Knesebeck (2004) asked participants to agree or disagree with the statement: 'In my neighbourhood, most people are willing to help others', while Lochner et al. (2003) asked participants to agree or disagree with the statement: 'people around here are willing to help their neighbours'. Finally, Maximiano (2012)

Freeth (2008) argue that such questions seem to be measuring perceived helpfulness more than reciprocity. In fact, measures of the norms of reciprocity had previously been unavailable to survey-based comparative research until the inclusion of six different measures of reciprocity (both positive and negative) in the German Socio-Economic Panel (GSOEP) in 2005 (Dohmen et al. 2006; Gundelach and Traummüller 2013).

Moreover, there are important distinctions between reciprocity and altruism, to the point that Abbott and Freeth (*ibid.*) argue that volunteering should not be considered an expression of reciprocity. Onyx and Bullen (2000), for example, found that questions about direct reciprocity, such as ‘If you help a neighbour is it important that they repay the favour as soon as possible’ bore no relation to factors of social capital and that more focus was needed on generalised reciprocity.<sup>20</sup> Also, while much research uses volunteering as an indicator of social connectedness, there is little evidence to suggest the relevance of this cross-culturally within international research. Robinson and Williams (2001), for example, point to the difference between altruism marked by *giving* (seen to be more dominant within a European and North-American context) and reciprocity marked by *sharing*. This distinction is important because sharing is understood as a form of cultural obligation and therefore not ‘voluntary’, and it would thus be overlooked within indicators that solely focussed on volunteering. Thus, it seems important to measure both reciprocity and volunteering as aspects of social connectedness.

Furthermore, while research has tended to treat social trust as a universal basis in the measurement of social cohesion, Hooghe (2007) argues that trust is an inadequate indicator compared to reciprocity. While social trust relies on ‘thick’ value consensus, norms of reciprocity do not presuppose consensus and are based on mutual recognition of ‘thin’ procedural norms (Hooghe 2007). Therefore, while often treated as interchangeable, trust and reciprocity are distinct, differing both conceptually and empirically, with survey measures forming separate dimensions (Gundelach and Traummüller 2013). This has led Gundelach and Traummüller (2013) to conclude that reciprocity, despite being neglected within research, constitutes the foundation of social trust (rooted in actual experiences of trustworthiness, rather than its perception), making it a vital element of social capital and an alternative foundation to social cohesion, especially in culturally diverse societies. This paper proposes indicators to measure both trust and reciprocity.

While support from personal relationships has been found to be a key factor for well-being, it seems even more important that this support is reciprocal. In part this is because giving too little, or the inability to give, may lead to feelings of shame or guilt, while giving more than one receives may lead people to feel exploited; this in turn can lead to power imbalances in relationships and eventually the termination of the relationship (Van Tilburg et al. 1991). Others (Deci et al. 2006) have found that giving autonomy support (relational support, responsiveness to others, and mutuality) to close friends is a higher predictor of well-being than receiving this support. Both of these insights are important when researching reciprocity in contexts of poverty, particularly when taking into

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Footnote 19 continued

proposes ‘If someone does something that is beneficial to me, then I am prepared to return a favour, even when this was not agreed upon in advance’ and ‘If I do something that is beneficial for someone else, then I expect that person to return a favour.’

<sup>20</sup> Examples of attempts to measure reciprocity directly can be found in Ziersch et al (2005) (‘Have you assisted neighbours and friends?; Have neighbours or friends assisted you?’) and Antonucci, Fuhrer and Jackson (1990) (Right now, would you say you provide more support advice and help to your (spouse, mother, father, child and friend) in your support network, is it about equal or does he or she provide more to you?’).



consideration Thomas et al.'s (2010, pp. 31–39) assertion that social capital may be a 'conditional resource'—meaning that those who are better able to capitalise on human and economic capital may remain poor but yet able to cope, while the chronic poor may remain so because of their inability to reciprocate (in terms of material resources). Thus, as documented in participatory research, 'poverty can pose a choice between isolation and shame' (Narayan et al. 2000, p. 258), marking one of the many 'difficult trade-offs and impossible choices' (Leavy and Howard 2013, p. 40) that constitute many poor people's daily realities and further highlighting the links between isolation and shame in people's experiences of poverty. Also, while honouring the resilience of people living in poverty and the importance of social connectedness, we should not take the existence of social support networks among the poor for granted or overlook the ways that economic policies and societal structures can enhance or erode these networks (Gonzalez de la Rocha 2007).

In light of the above concerns, this paper proposes specific questions on both reciprocity and volunteering. The questions on reciprocity have been borrowed from the German Socio-Economic Panel (GSOEP) (2005), as outlined in Dohmen et al. (2006) and Gundelach and Traummüller (2013). While these measures are centred on attitudes, there is experimental evidence to suggest that answers to the survey items do correspond to behaviour (Gundelach and Traummüller 2013). In turn, this paper proposes to use questions on volunteering proposed by the US Current Population Survey and suggested by Stiglitz et al. (2009).

To capture data on aspects of internal isolation, namely, (1) satisfaction with social relations, (2) need for relatedness, (3) feeling of belonging to one's own neighbourhood, (4) loneliness, and (5) trust, this paper proposes to use a series of indicators.

The indicators on satisfaction with social relations and need for relatedness follow the proposal advanced in the accompanying paper within this series on psychological and subjective well-being (Samman 2007).<sup>21</sup> The former tests the subjective satisfaction of a person within different specific domains of life.<sup>22</sup> This paper proposes to add a series of specific aspects to this list, including satisfaction with friends, family, spouse or partner, and work colleagues. These specific aspects are highly ranked in Cummins (1996) review of the most commonly relevant domains of life satisfaction (see also Samman 2007) and follow the suggestion of the UK's ONS regarding measuring different levels of social relationships (2011). In turn, the latter is one of the three scales from the Basic Psychological Needs Scales advanced in self-determination theory (SDT) (Ryan and Deci 2000, 2001). Self-determination theory postulates that social-contextual conditions rather than merely biological endowments determine how proactive and engaged or, alternatively, passive and alienated, human beings can be; hence, it investigates the 'factors.... That enhance versus undermine intrinsic motivation, self-regulation, and well-being. The findings have led to the postulate of three innate psychological needs—competence, autonomy, and relatedness—which when satisfied yield enhanced self-motivation and mental health and when thwarted lead to diminished motivation and well-being' (Ryan and

<sup>21</sup> OPHI's Missing Dimensions of Poverty Data explores indicators for five dimensions of life for which there is little or no effort to collect data on an internationally comparable scale and that have been widely named by people living under poverty as relevant to their experience. The dimensions explored are quality of work, empowerment, physical safety, psychological and subjective well-being, and social connectedness. For further details, see: <http://www.ophi.org.uk/research/missing-dimensions/>.

<sup>22</sup> These include: (1) Life overall; (2) Food; (3) Housing; (4) Income; (5) Health; (6) Work; (7) Local security level; (8) Friends and Family; (9) Education; (10) Neighbourhood; (11) Ability to help others; (12) Well-being from spiritual, religious or philosophical beliefs.

Deci 2000, p. 68). As with the previous indicator, we follow Samman (2007) for the short-form of this particular scale.

Next, the indicator used to measure feeling of belonging to one's own neighbourhood is derived from the UK's Department for Communities and Local Government Citizenship Survey 2010–2011. A feeling of belonging has been linked to well-being, attests to the existence of meaningful relations with the community, and is related to a person's sense of identity (ONS 2011).

The questions chosen to measure loneliness are a short module of the UCLA Loneliness Scale (Version 3) (Russell 1996, 1982) and the de Jong Gierveld short scales for emotional and social loneliness (de Jong Gierveld and Van Tilburg 2006, 2010). Loneliness is associated with a low level of education and poor income (de Jong Gierveld and Van Tilburg 2010; Hawkey et al. 2005; Savikko et al. 2005). Loneliness scales constitute a direct assessment of a person's perception of the quality of his or her relationships. The two scales proposed here have been widely used for research on loneliness (Cattan et al. 2005; de Jong Gierveld and Van Tilburg 2006; Pinquart and Sörensen 2001; Russell 1996). The UCLA Loneliness Scale (Version 3) has been found to be a highly reliable measure—both in terms of internal consistency and test–retest reliability over a one-year period—and to have convergent and construct validity (Russell 1996). While the original scale consists of 20 items, this paper proposes to use a four-item version suggested by Russell due to the time constraints involved in large survey exercises (1982, pp. 94–96). In line with Russell (1996), the wording has thus been modified. The de Jong Gierveld scale, in turn, has been found to be a valid and reliable measurement instrument to capture feelings of both emotional and social loneliness, and, particularly relevant for this exercise, is suitable for large surveys (de Jong Gierveld and Van Tilburg 2006). Testing both scales will allow a determination of the advantages and disadvantages of each scale for the purpose of this exercise (e.g., the advantages of a shorter scale versus the potential information on emotional and social loneliness that a larger scale could provide).

In regards to trust, different questions have been selected to capture data. This selection follows the approach of the SC-IQ on measuring trust, namely, (a) to blend questions on generalised trust with the extent of trust in specific types of people/institutions or transactions and (b) to use multiple questions in order to cross-validate the responses. Two elements have been added to the original SC-IQ proposal. First, the list of specific types of people/institutions have been enlarged to include trust in private enterprises and the legal system to allow testing of a more specific hypothesis with respect to trust and institutions. Also, a situational question has been added following Stiglitz et al. (2009, p. 185), as it is more specific and quasi-behavioural and thus more reliable than generalised questions.<sup>23</sup> This question, however, needs to be carefully adapted to local contexts.

The following section introduces each indicator and the data collection questions.

## 4.1 External Social Isolation

### *Question 1 Frequency of contact with family.*

Data collection question (Survey of Public Attitudes And Behaviours Towards the Environment 2011):<sup>24</sup>

Q. How often in the previous two weeks have you spent time together with family?

<sup>23</sup> See also Glaeser et al. (2000) for a discussion on the standard survey questions about trust.

<sup>24</sup> In Self et al. (2012).

Response structure: (a) Every day; (b) Most days; (c) Few days; (d) Never.

**Question 2** *Frequency of contact with friends and relatives living outside the household.*

Data collection question (from EU Survey of Income and Living Conditions on Social Participation 2006):<sup>25</sup>

Q. How often in the last week did you meet face to face with friends and relatives living outside your household?

Response structure: (a) Every day; (b) Most days; (c) Few days; (d) Never.

**Question 3** *Emotional support.*

Data collection question (from European Social Survey Round 5, 2010):<sup>26</sup>

Q. Do you have anyone with whom you can discuss intimate and personal matters?

Response structure: (a) Yes; (b) No; (c) Refusal; (d) Don't know; (e) No answer.

**Question 4** *Social network support.*

Data collection question (Gallup World Poll):<sup>27</sup>

Q. If you were in trouble, do you have relatives or friends you can count on to help, such as financial assistance?

Response structure: (a) Yes; (b) No; (c) Does not know/Does not want to answer; If yes, how much support?

**Question 5** *Reciprocity.*

Data collection question (German Socio-Economic Panel—GSOEP):<sup>28</sup>

Q. Respondents were asked to indicate on a seven-point scale how well each of the following statements applies to them personally.

- (a) If someone does a favour for me, I am ready to return it.
- (b) I go out of my way to help somebody who has been kind to me before.
- (c) I am ready to undergo personal costs to help somebody who helped me before.

Response structure: participants are asked to rate their answer between one and seven, with one being 'does not apply to me at all' and seven being 'applies to me perfectly'.

**Question 6** *Volunteering.*

Data collection question (US Current Population Survey):<sup>29</sup>

Q. In the last 12 months have you done any volunteer activities through or for an organization?

Response structure: (a) Yes; (b) No; (c) Does not know/Does not want to answer.

<sup>25</sup> In OECD (2011).

<sup>26</sup> see <http://www.europeansocialsurvey.org>.

<sup>27</sup> see <http://www.gallup.com/strategicconsulting/en-us/worldpoll.aspx>.

<sup>28</sup> In Dohmen et al. (2006).

<sup>29</sup> In Stiglitz et al. (2009).

## 4.2 Internal Social Isolation

### **Question 7 Levels of satisfaction.**<sup>30</sup>

Data collection question (based on Cummins 1996):<sup>31</sup>

Q. In general, how satisfied or unsatisfied are you with your:

- (a) Life overall.
- (b) Food.
- (c) Housing.
- (d) Income.
- (e) Health.
- (f) Work.
- (g) Local security level.
- (h) \*\*Friends.
- (i) \*\*Family.
- (j) Education.
- (k) Free choice and control over your life.
- (l) Dignity.
- (m) Neighbourhood/town/community/
- (n) Ability to help others.
- (o) Spiritual, religious or philosophical beliefs.
- (p) \*\*Spouse or partner.

\*\* Note: Added questions.

Response structure FOR EACH ITEM: 1 = Very satisfied; 2 = Fairly satisfied; 3 = Not very satisfied; 4 = Not at all satisfied; 99 = Don't Know/No Answer.

### **Question 8 Need for relatedness.**

Data collection question (From Ryan and Deci Basic Psychological Needs scales):<sup>32</sup>

Q. How true are the following statements for you?

- a. I get along well with people I come into contact with.
- b. I consider myself close to the people I regularly interact with.
- c. People in my life care about me.

Response structure: 1 = Not at all true; 2 = Somewhat true; 3 = Fairly true; 4 = Completely true; 5 = Don't know/No answer.

### **Question 9 Whether people feel that they belong strongly to their neighbourhood.**

Data collection questions (UK's Department for Communities and Local Government—Citizenship Survey 2010–2011):<sup>33</sup>

<sup>30</sup> Note: This question without the suggested additions is found in OPHI's Psychological and Subjective Well-being Module. If both modules are being tested at the same time, this question can be avoided. However, the question in that module needs to be complemented by the suggested additions.

<sup>31</sup> See Samman (2007).

<sup>32</sup> See Samman (2007).

<sup>33</sup> In OECD (2011).

Q. How strongly do you feel you belong to your immediate community/neighbourhood?  
Response structure: 1 = Very strongly; 2 = Fairly strongly; 3 = Not very strongly;  
4 = Not at all strongly; 5 = Don't know.

**Question 10 Level of loneliness felt by respondent.**

Data collection questions (from Russell 1996):

Q. Indicate how often you feel the way described in each of the following statements.  
Circle one number for each.

1. How often do you feel that you are 'in tune' with the people around you?
2. How often do you feel that no one really knows you well?
3. How often do you feel you can find companionship when you want it?
4. How often do you feel that people are around you but not with you?

Response structure: 1 = Never; 2 = Rarely; 3 = Sometimes; 4 = Often.

Note: Questions 1 and 3 must be reversed before scoring (i.e., 1 = 4, 2 = 3, 3 = 2, 4 = 1).

**Question 11 Level of loneliness felt by respondent.**

Data collection questions (from de Jong Gierveld and Van Tilburg 2010):

Q. Please indicate for each of the statements, the extent to which they apply to your situation, the way you feel now. Please circle the appropriate answer.

1. I experience a general sense of emptiness.
2. There are plenty of people I can rely on when I have problems.
3. There are many people I can trust completely.
4. There are enough people I feel close to.
5. I miss having people around.
6. I often feel rejected.

Response structure: 1 = yes!; 2 = yes; 3 = more or less; 4 = no; 5 = no!

Alternative answer categories: 1 = yes; 2 = more or less; 3 = no.

Note: Scores from items 2, 3 and 4 should be reversed before analysis.

**Question 12 Overall level of trust.**

Data collection questions (from World Values Survey):<sup>34</sup>

Q. Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?

Response structure: 1 = People can be trusted; 2 = You can't be too careful.

**Question 13 Level of trust of people from own village/neighbourhood.**

Data collection questions (from SC-IQ):<sup>35</sup>

Q. In general, do you agree or disagree with the following statements?

<sup>34</sup> See [http://www.worldvaluessurvey.org/index\\_surveys](http://www.worldvaluessurvey.org/index_surveys).

<sup>35</sup> Grootaert et al. (2004).

- (A) Most people in this village/neighbourhood are willing to help if you need it.
- (B) In this village/neighbourhood, one has to be alert or someone is likely to take advantage of you.

Response structure: 1 = Agree strongly; 2 = Agree somewhat; 3 = Neither agree or disagree; 4 = Disagree somewhat; 5 = Disagree strongly.

#### **Question 14 Level of trust.**

Data collection questions (from SC-IQ):<sup>36</sup>

Q. How much do you trust....

1. Local government officials.
2. Central government officials.
3. Private businesses.
4. Legal system.

Answer category: 1 = To a very great extent; 2 = To a great extent; 3 = Neither great nor small extent; 4 = To a small extent; 5 = To a very small extent.

#### **Question 15 Level of trust.**

Data collection questions (Stiglitz et al. 2009):

Q. If you lost a wallet or a purse that contained two hundred dollars, and it was found by a neighbour, how likely is it to be returned with the money in it? (Note: This question needs to be adapted to local context.)

Answer category: 1 = Very likely; 2 = Somewhat likely; 3 = Somewhat unlikely; 4 = Not at all likely.

## **5 Conclusions**

This paper has reviewed several literatures pertaining to the measurement of social isolation and related phenomena, and proposed a series of indicators to provide data on social connectedness. In particular, this paper argues for the need to explore data on the external characteristics of social connectedness (the frequency of social contact, the social network support of a person, and intensity of volunteering) as well as its internal characteristics (satisfaction with social relations, sense of relatedness, feeling of belonging to one's own neighbourhood/village/community, loneliness, and trust). These indicators emphasise direct measures of, and stress the self-evaluation of, social connectedness. Building on a wide body of research on aspects of social relations, the proposed indicators follow the guidelines of major initiatives to improve the measurement of human progress. These indicators need to be tested in large surveys alongside traditional socio-economic indicators, and in international contexts, in order to test both their validity and usefulness for poverty analysis.

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<sup>36</sup> *idem*.

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