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The Innovation of Values: Exploring the Role of News Media Exposure and Communication in Moral Progress in the Netherlands

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ABSTRACT

The world has made enormous moral progress since the 1980s. People emphasize universal emancipative values and freedom more. In this research, the role of media use and interpersonal communication therein is studied from a diffusion of innovations perspective. A secondary analysis of World Values Survey data from the Netherlands was conducted (N = 4281). Emancipative values are widely supported; however, worries about loss of freedom and moral regress increasingly lead to societal conflicts. The results show value gaps and different uses of media between adoption categories, especially between laggards and others. Multimedia use is correlated to supporting emancipative values. Early adopters use news media most, while early majority and laggards use digital media more. Outcomes such as lower levels of connectedness in combination with higher standard deviations for emancipative values indicate that media and interpersonal communication can help include laggards more in supporting emancipative values and resolving social conflicts.

In the last four decades, the world has made enormous moral progress in the direction of more empathy, solidarity, justice for all and ecological sustainability (Buchanan & Powell, 2018; Pinker, 2018; Welzel, 2013a, 2017; TEDx). This quest for freedom, empowerment, emancipation, and their realization has risen worldwide. Societies continue to climb the freedom ladder, which means that so-called emancipative values are increasingly emphasized by a large

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portion of the population (Welzel, 2014). Emancipative values champion the importance of individual choice and tolerance in matters of abortion, divorce and homosexuality, and women's equality; more voice in politics at all levels and the greatest possible levels of autonomy for the individual (Welzel, 2013a, 2013c).

The media landscape has also changed enormously in the last four decades. Since the 1980s the dominance of traditional mass media has been challenged. First by the growth and diversification of media channels (e.g., commercial television next to public broadcasting in Europe), second by the rise of the internet at the end of twentieth century, and third by the rise of social media in the last decade (McQuail & Deuze, 2020). Media and communication are considered pivotal for innovation and change (e.g., Rogers, 2003), hence the importance of studying the role of news media, digital media and face-to-face communication in value change.

The question is how the trend toward increased emphasis of emancipative values, and the changes in media landscape and media use, are related. Are values and value change affected by media and if so, how and with whom? The goal of this research is to explore this question, especially for the relationship between media use and emancipative values. The development of values is surveyed extensively in the World Values Survey (WVS) project. Since 1981, a global network of social scientists has longitudinally studied changes in values and their impact on societies worldwide. In six subsequent waves of nationally representative surveys, WVS scientists have mapped the values of 94.5% of the world's population in 120 countries. The seventh wave is currently in progress and will be completed in 2022 (World Values Survey [WVS], 2020). The results show consistent global evolutionary development in the direction of secular-rational and self-expression values (see the Inglehart–Welzel Cultural Map, R. F. Inglehart, 2018; WVS, 2020) and more emphasis on emancipative values (Welzel, 2013a, 2013c, 2014). This development has been described and explained by the evolutionary modernization theory, the revised and broader version of classic modernization theory (e.g., R. F. Inglehart, 2018; Inglehart, 2001).

Widespread media and communication are positively correlated with emphasizing emancipative values (Welzel, 2013a), but so far, Mahrt's (2010) observation that the "role of the (mass)media in the 'modernization' of societies remains largely unaddressed." is still valid. Are the media, for example, mirroring values that are already present in a society or are they molding new value patterns and actively contributing to value changes (Emons et al., 2008, 2009)? Past research into the subject is limited and has produced mixed results, but some evidence links media exposure and values (Besley, 2008; Mahrt, 2010).

In this study the way in which value change is affected by media and communication is further explored, specifically concerning the support for emancipative values. The overall research question is:

RQ: How are news media exposure and communication related to the diffusion and distribution of emancipative values in a society?

Exploring this question is not just important because it is understudied, but it is also topical because value differences increasingly lead to societal conflicts, not only between countries but also within modern democracies. Increasing polarization, tensions, and cultural conflict are widely perceived in morally progressive countries such as those in Scandinavia (Holmström et al., 2009) and the Netherlands ("Nederlanders hebben het", 2019). In the Netherlands—a country that consistently scores in the top 10 of the most emancipative countries—75% of the population perceives an increasing polarization on social issues and a major conflict between native Dutch citizens and migrants, especially those with a non-Western background (Den Ridder et al., 2019). Worries about a loss of freedom and moral regression have led to heated debates. These debates are for example, about homophobia in radical Christian circles (Naber, 2019) and Islam (Holdert & Kouwenhoven, 2019), a new wave of prudishness that is viewed as an attack on freedom (Van der Zee, 2019), and responses that call for "a free and unhampered debate, a neutral state, secular education for all children and a renewed appreciation for individual freedom" (Aynan et al., 2018, "Manifesto," para. 7). New social movements are being established, like the Free Left Foundation (Aynan et al., 2018) @Gays for Freedom, (Gays For Freedom, n.d.) and the Pink Lion (De Roze Leeuw, n.d.). They oppose, amongst others, religious zealots and other conservatives and want to address the deadlock in the discussion about freedom and the threats to freedom they experience in the Dutch society. The Netherlands Institute for Social Research (SCP) found that the Dutch public blames polarization and conflict on the media, especially the internet and social media. However, polarization today is no higher than it was in the 1970s (Den Ridder et al., 2019). What is the role of the (social) media here? Are they the culprit for societal conflicts about emancipative values? Do they stir up conflicts that otherwise do not exist, or are there underlying value gaps in the population that are made visible in the news media and on social media?

Purpose and approach

This research aims to contribute to better understanding the relationship between media use, communication, emancipative values, and value

change, and their possible variance within different categories of the population. The rise of emancipative values is regarded as a diffusion of an innovation and studied as such. An innovation is "an idea, practice, or object that is perceived as new by an individual or other unit of adoption" (Rogers, 2003, p. 12). The modernization of society in the direction of emphasizing emancipative values can be considered an innovation of the value system in the tradition of one of the most elaborate theories in communication science: the diffusion of innovation theory (DOI; Kreps, 2017; Potter & Riddle, 2007; Rice, 2016; Rogers, 2003; Vishwanath & Barnett, 2011). DOI will be used as a communication supplement to modernization theory. DOI describes how innovations are diffused and adopted in a social system over time. It explains and predicts differences in innovativeness between groups in a society in terms of personality traits, socioeconomic characteristics, and communication behavior (Rogers, 2003). Using DOI provides a deeper understanding of the role of media and communication in value change and of the diffusion of values in a society, because media and communication are at the heart of the theory.

Studying values and media in the DOI framework can shed a light on the differences in supporting emancipative, universal values in a society and it can discover value gaps. This is important for modern societies because narrowing cultural gaps can be considered one of the most important challenges today and in the next decade (Welzel, 2017, TEDx). Results can inform policymaking and help break the deadlock in addressing value gaps that exists in contemporary democracies. Furthermore, value conflicts and polarization are increasingly blamed on (social) media, although the relationship between values and media is not well known. A DOI perspective can generate new knowledge about the relationship and can inform the development of communication interventions to reduce tensions.

The Netherlands is used as a case study because it scores relatively high on the Emancipative Values Index (EVI) of the WVS, but at the same time cultural conflict is a prominent focus of the country's agendas in the last twenty years. The Netherlands is a country of 17.4 million inhabitants in Western Europe (Centraal Bureau voor de Statistiek [CBS], 2020) and one of the most morally progressive societies in the world. It reached a critical mass of more than 20% of the population emphasizing emancipative values in the 1980s. It was the first to allow same-sex marriage, and more than 90% of its population supports a free life for gays and lesbians (European Social Survey [ESS], 2018), Additionally, euthanasia was legalized in 2001 (Weyers, 2002), a toleration policy regarding the sale of soft drugs is in place, and prostitution is a legal and regulated profession (Government of the Netherlands, 2020). Furthermore, the country has free and independent media (Freedom House, 2020) that reach a large portion of the population: Daily newspapers, 40.4%, television and radio, 68.5%, access to mobile

(smart) phones, 90.3%, PC, 80.9%, and tablet, 68.8% (Commissariaat voor de Media, 2019).

Theory

Values, media use and communication

Not much is known about the relationship between values, media, and communication. The limited research that has been done suggests a complex relationship. Some studies show that media content, especially of entertainment shows, follows or mirrors social cultural changes in a society (Emons et al., 2008). Others show the opposite, that media content precedes or molds social cultural change (Emons et al., 2009). It seems that media exposure is linked to value orientations, but the relationships are small (Besley, 2008; Mahrt, 2010). There is evidence that people select media according to their values, so media exposure is value driven (Mahrt, 2010), but it could also be the other way around, media exposure leading to changes in values. It could also be mutually reinforcing spirals of feedback loops between media exposure, media content, and values (Slater, 2007).

In any case, news media exposure and communication are connected to the increasing emphasis on emancipative values. Welzel (2013a, 2013b) modeled media exposure and communication as informational connectedness (IC), an 8-item index measuring the diversity of information sources used, including newspapers, television news, magazines, in-depth documents, the internet, informal talks, and PC use. High scores for IC are treated as antecedents for emancipative values. IC is significantly correlated with emancipative values in Western countries (r = .30), as well as in non-Western countries (r = .25; Welzel, 2013a, pp. 79–80). These correlations seem strong, since most studies on media effects "have typically yielded small to moderate effect sizes that lie between r = .10 and r = .20" (Valkenburg et al., 2016, p. 317). The relatively strong correlations found might be explained by the inclusion of face-to-face communication in IC.

Evolution and diffusion of emancipative values

The rise of freedom and moral progress is usually explained by modernization theories, in which media use and communication behavior play a minor role preceding value development. Modernization theories describe the processes that societies go through when transforming from traditional, rural, and agrarian societies into secular, urban and industrial societies. At the heart of this transformation is industrialization as a way to escape poverty and increase societal wealth. Key characteristics of this process

include secularization (the loss of the meaning and legitimation of religion) and bureaucratization (a rational way of organizing society). Other characteristics of this "modernization syndrome" (Inglehart, 2001, p. 9975) include urbanization, the application of science and technology in all sectors of life, rapidly increasing occupational specialization, and rising educational levels (Inglehart, 1997, 2001). This transformation is a global phenomenon despite it occurring at different rates. In general, the more modern a society is, the more moral progress has been made. Evidence for this is found in evolutionary modernization theory (EMT; R. F. Inglehart, 2018) and evolutionary emancipation theory (EET; Welzel, 2013a, 2013c, 2014).

In Welzel's EET (Welzel, 2013a, 2013c, 2014), the global cultural evolution is summarized by the EVI, which measures the level of emphasis on emancipative values on a scale from zero to one. The EVI measures four constructs determining the importance an individual ascribes to emancipative values: (1) choice, (2) equality, (3) voice and (4) autonomy. The result is a score per individual that is used to calculate the average score per country (Welzel, 2013b). In Wave 6 of the WVS, country averages ranged from .22 (*SD* = .14) in Yemen to .61 (*SD* = .17) in the Netherlands and .72 (*SD* = .16) in Sweden, with a global average of .41 (*SD* = .17; WVS, 2015, pp. 830–831).

Welzel (2013a) describes and explains that emancipative values are universal values that are at the heart of humanistic universalism, increased human empowerment and democracy. These values are found all over the world in all countries and cultures, and are not uniquely Western. However, their dominance and realization are dependent on local cultures and circumstances (Welzel, 2013a, pp. 38–44). In societies where people live under existential pressures, survival values dominate, and in societies where these existential pressures are less pronounced, emancipative values dominate. Existential pressures can also affect whether a culture is more collectivistic (high pressure) or more individualistic (lower pressure). This does not mean that more collectivistic cultures always experience existential pressures or cannot be modern. The EMT shows that "cultural change is path dependent: a society's values are shaped by its entire historical heritage, and not just its level of existential security" (Inglehart, 2018, p. 24).

Value differences between countries are much more significant than value differences within countries. There are also value differences within countries though. Female gender, younger age, higher socioeconomic status, higher educational achievement, and living in a residential area are the most important positive predictors of emancipative values. Religious faith is one of the most important negative predictors (Welzel, 2013a). In many countries, specific historical configurations have led to distinct divisions. In

the Netherlands, this has traditionally involved a Protestant-Catholic division (Welzel, 2013a, p. 101).

Emancipative values as an innovation

EET describes the mechanisms behind the development of emancipative values over time well. Complementing this with DOI theory can deepen the understanding of these mechanisms. Central to the diffusion of an innovation is the process of information exchange through communication (Vishwanath & Barnett, 2011). Diffusion is a process "by which an innovation is communicated through certain channels over time among the members of a social system. Diffusion is a special type of communication concerned with the spread of messages that are perceived as new" (Rogers, 2003, p. 35). Many studies have corroborated the original model of the diffusion of innovations (Rice, 2016). Rogers (2003) summarized and synthesized DOI research and concluded that innovations follow an S-shaped diffusion curve over time, which begins to gain critical mass when 10 to 20% of the population has adopted the innovation and interpersonal communication has begun to spread the word. Most research shows that the distribution of innovativeness, the degree to which individuals adopt innovations sooner than others, follows a bell-shaped curve and approaches normality. The question is whether this works the same for emancipative values. In DOI theory five adoption categories are distinguished. Innovators are the first 2.5% of individuals in a society to adopt an innovation. They are typically venturesome and cosmopolitan and embrace innovations quickly. The second 13.5% are early adopters and serve as respected local opinion leaders and role models for the rest of society. The next 34% form the early majority, who engage in lengthy and careful consideration before adopting an innovation but still follow just before the average person does. The next 34% form the late majority, which is a skeptical and cautious group that does not adopt an innovation until most others in society have already done so. The group must be peer pressured to adopt something new. The last 16% are the laggards, who are traditionalists and the last to adopt an innovation due to their local outlook, reference to the past and limited resources. The resulting differences in adoption rates follow a continuum (pp. 279–287).

DOI theory leads to two research questions and our first hypothesis:

RQ1: Does the adoption of emancipative values in the Netherlands follow an S-shaped curve over time?

RQ2: Does the adoption of emancipative values in the Netherlands follow the same bell-shaped curve and normality pattern as the adoption of new products?

H1: Innovators and early adopters emphasize emancipative values more than early majority adopters, late majority adopters and laggards in the Netherlands.

Media, communication and innovation

Media and communication are at the heart of Rogers' (2003) DOI theory. Abundant research has showed that innovators and early adopters use news media and interpersonal communication channels differently than later adopters do (pp. 287–291). It can be expected that this is also the case for innovators and early adopters of emancipative values.

Furthermore, based on many empirical studies, Rogers (2003) showed significant differences in the use of communication channels between earlier and later adopters. Mass media are relatively more important for obtaining knowledge about an innovation and interpersonal communication for persuading an individual to embrace and implement an innovation (pp. 205–206). New media technologies (internet, digital media, social media) are changing the diffusion of innovations through media (Danowsku et al., 2011). How these changes play out for the diffusion of innovations is not clear. Internet use is associated with both a conservational as well as liberal openness-to-change values (Besley, 2008).

The summary of the research literature on the diffusion of innovations specifies ideal distinctions between earlier and later adopters and innovators and laggards. Innovators are considered gatekeepers in the flow of new ideas; they are connected to other innovators who might be geographically distant, have substantial financial and intellectual resources, can handle uncertainty, and are not necessarily respected by other members of their local social systems (pp. 282–283). Earlier adopters do have respect for their local communities and therefore act as opinion leaders. Compared to the early and late majority, early adopters participate more in their social systems, are more involved in interpersonal networks, are more cosmopolitan, use more mass media, and communicate more with change agents. They are active information seekers and have more knowledge of innovations (p. 298). Laggards are the opposite of innovators and lag far behind early adopters. They exhibit almost no opinion leadership, their outlook is local and focused on the past, they are isolated and interact primarily with other laggards, and they are suspicious of new ideas and lag far behind in awareness and knowledge of new ideas held in their communities. Their precarious economic position is considered to partly explain their behavior (pp. 284–285).

Interpersonal communication plays an important role, especially for later adopters. Currently, interpersonal communication not only involves face-to

-face interaction but also increasingly takes place online. This might alter the diffusion of innovations (Danowsku et al., 2011). Traditional face-to-face communication is combined with the use of social media and other forms of digital media; using computers and/or mobile devices (Chun & Soderman, 2011). These could work as a mediator between news media use and emancipative values.

Based on DOI theory the following hypotheses are formulated:

H2: Individuals with higher levels of IC emphasize emancipative values more than individuals with lower levels of IC in the Netherlands.

H3: Earlier adopters are more exposed to mass media than later adopters in the Netherlands.

H4: Earlier adopters are more exposed to face-to-face communication than later adopters in the Netherlands.

H5: Earlier adopters are more exposed to digital media than later adopters in the Netherlands.

H6: The effect of mass media exposure on emphasizing emancipated values is mediated by the use of digital media and face-to-face communication in the Netherlands.

Method

A secondary analysis was performed using data from WVS waves 6 and 7 for the Netherlands. Both waves were representative samples, with sample sizes appropriate for the Dutch population (2012: N = 1902; 2017: N = 2379) and following the rules of the WVS including extra sampling of groups that are difficult to reach, especially immigrants. The data files, questionnaires and codebooks are available from the WVS website (WVS, 2020). The Netherlands was included in waves 1 to 7, and the provisional dataset for wave 7 became available in August 2020. All data and documentation were free of charge and produced by the WVS Data Archive in collaboration with the investigators in the Netherlands, compliant with local protocols regarding research on human subjects.

For RQ1, the longitudinal aggregated dataset with key aggregates from 6 waves was used (Inglehart et al., 2014b), and 2017 data were added to the dataset. Two variables were used, namely, Year and EVI.

For RQ2 and H1-6, data were drawn from wave 6 of the WVS, which was conducted between 2010 and 2014 (Inglehart et al., 2014a). From the

pooled country data file, a separate dataset was created for the Netherlands. For RQ2 and H1, 2, 3 and 5, it was possible to use data from wave 7, which was conducted in 2017. Two datasets were used, namely, the WVS-wave-7 file (Haerpfer et al., 2020) and the file for the Netherlands from the European Value Survey (EVS), which conducted research for wave 7 (EVS, 2020). From the pooled country WVS datafile, a separate dataset for the Netherlands was created. Media variables from the EVS-dataset were added to this file.

Measures

Dependent variables

The first dependent variable used is the EVI. This index was developed and documented by Welzel (2013b) and is part of the WVS datasets. The EVI is a 12-item index measuring how much emphasis national cultures place on universal freedoms. These universal freedoms include (1) reproductive choice (acceptance of divorce, abortion, and homosexuality), (2) gender equality (support of women's equal access to education, jobs, and power), (3) people's voice (prioritization of freedom of speech and people's say in national, local and job affairs) and (4) personal autonomy (independence, imagination and nonobedience as desired qualities in children). The answers to these items are recoded on a continuous scale ranging from a theoretical minimum of 0 to a maximum of 1; every respondent is assigned a score of 0 to 1. Every country is given an EVI score that is the average (arithmetic mean) of the 0–1 index.

Second, media use and communication variables from both datasets were used as dependent variables. The WVS-wave 6 dataset measures 8 media and communication variables: uses of daily newspapers for *following the news*, printed magazines, television news, radio news, mobile phones, e-mail, the internet and discussions with friends and colleagues. All variables were recoded in reverse order from never (0) to daily use (4) to create an ordinal scale used as a semi-interval scale. Subsequently, three new variables were created: informational connectedness (IC), news media exposure (as operationalization of mass media) and digital media exposure. IC was created by summing all 8 variables and dividing them by 8. News media exposure was measured by adding values for the use of newspapers, printed magazines, television, and radio news and dividing them by 4. Digital media exposure was measured by summing values for internet use, mobile phone use and e-mail use for news and dividing them by 3.

The EVS datafile with data for WVS wave 7 measures 4 media variables that are worded differently than the wave 6 media and communication variables. Respondents were asked how often they used television, radio,

newspapers, and social media sources *to follow politics*. All variables were recoded in reverse order from never (0) to daily use (4) to create an ordinal scale used as a semi-interval scale. Subsequently, a new variable, media connectedness, was created by summing all 4 variables and dividing them by 4. See online Appendix A for additional information.

Independent variables

To test H1, 3, 4 and 5, an innovativeness variable was created based on DOI theory. Taking the EVI scores as a starting point, respondents were allocated to the theoretical diffusion categories, including innovators (2.5% highest scoring respondents), early adopters (the following 13.5%), the early majority (the following 34%), the late majority (the following 34%) and laggards (the lowest scoring 16%). This categorization of innovativeness is used cross-sectionally as a continuous variable in the same way as dividing a society into social status or social classes.

To test H2, connectedness was used as an independent variable of the EVI, measured as informational connectedness (IC) in 2012 and media connectedness in 2017.[1] H2 was first tested with connectedness alone and then with control variables based on their importance as shown by EET and DOI theory: education, household income, age, gender, ethnicity, and religion for wave 6. In wave 7, ethnicity was not measured, so it was not included as part of the analysis. Respondents' ages were included in the dataset. The following variables were recoded: education as a scale variable of 0–1 following Welzel (2013b), household income as a scale variable of 0–1 following Welzel (2013b), gender as a dummy variable with male gender as a reference, ethnicity as a dummy variable with white Caucasian ethnicity as a reference, and religion as a dummy with no religion as a reference. In wave 7, religion was categorized differently than in wave 6 and was reduced to 4 categories instead of 6.

Mediator

To perform a mediation analysis with the EVI used as the dependent variable, the use of news media used as the predictor and digital and face-to-face communication as the mediator, a new variable digital and face-to-face communication was created by summing digital communication and face-to-face communication and dividing them by 4. This could only be

[1]Different wordings are used because media use is measured differently in 2012 and 2017. In 2012 face-to-face communication was included, in 2017 it was not, hence *informational* connectedness in 2012 and *media* connectedness in 2017.

done for 2012 since the 2017 survey did not measure face-to-face communication.

Analyses

To answer RQ2, a test for normality was performed on the EVI. To test H1, a one-way ANOVA was conducted with a Games-Howell post hoc test and Welch statistic. For H2, first, a correlation analysis was performed, which was followed by a multiple regression to control for the influence of other variables explaining the EVI. Type 2 errors were checked with a univariate analysis of variance. To test the differences in communication patterns predicted by H3, 4 and 5, a one-way ANOVA was performed with planned comparisons tests. Additionally, an ANCOVA was done to check for control variables. To test a mediation effect of digital and face-to-face communication on news media use and emancipative values as stated in H6, a mediation analysis was performed using Hayes' PROCESS macro.

Results

RQ1 and 2 explore similarities between the diffusion patterns of innovative products relative to emancipative values over time. An S-shaped curve and a normal distributed bell-shaped curve are expected. The data show that the adoption of the EVI in the Netherlands approaches this S-shaped curve from 1981 to 2017, although there has been a period of relative stability from 1990 to 2012, more resembling an R-shaped curve. Scores rose from .47 in 1981 to .59 in 1990, .58 in 1999, .60 in 2006, .61 in 2012 and .65 in 2017. RQ1 is thus answered affirmatively.

WVS data from waves 6 and 7 show that the cross-sectional innovativeness of the EVI follows a bell-shaped curve and approaches normality, presenting a unimodal distribution with one peak. The normality test shows that it approaches normality but not perfectly (see online Appendix B). Negative kurtosis (2012: −.137; 2017: −.061) and skewness (2012: −.343; 2017: −.348) in both years show that the distribution is slightly asymmetrical. Negative kurtosis indicates that the distribution is relatively thin in the tails (platykurtic) and that the data exhibit fewer extreme outliers than a symmetrical normal distribution (pointiness). There is a high degree of agreement on emancipative values as underlined by small standard deviations and a median and mode that are both higher than the mean. The skewness of the distribution is also negative, and it has a long left tail. This lack of symmetry indicates that the mean score of the EVI is pulled down by the long left tail. We find lower scores for the EVI than expected from a normal distribution. This is also indicated by the range of scores with a minimum score of .04 and

a maximum score of 1 found for both years. This range shows an absolute value gap of −.96 (maximum score − minimum score). RQ2 is thus answered affirmatively.

Innovativeness

The wave 6 and 7 data show that levels of innovativeness differ significantly between the adoption categories, resulting in value gaps. Innovators emphasize emancipative values the most, followed by early adopters, the early majority, the late majority and laggards. A one-way analysis of variance (ANOVA) shows that differences between the categories are significant for 2012, $F(4, 1849) = 4274.409$, $p < .000$ and 2017, $F(4, 2373) = 4878{,}186$, $p < .000$. The Games-Howell post hoc test shows that all group means differ significantly, $p < .05$. The overall value gap between innovators and the other categories is −.33 for 2012 and −.31 for 2017 (see, Table 1).

The group sizes are not equal, and Levene's F-test shows that in both years, equal variances in the population cannot be assumed, $F(4, 1849) = 60.640$, $p < .000$ in 2012 and $F(4, 2374) = 93.649$, $p < .000$. There are significant variances within the innovativeness categories, Welch $F(4, 304.486) = 4679.089$, $p < .000$ in 2012 and Welch $F(4, 424.505) = 6287{,}379$, $p < .000$, as indicated by the SDs. They are larger for categories that emphasize emancipative values less. Innovators are more in agreement on emancipative values among themselves than the other groups are. H1 is thus confirmed.

Connectedness

H2 states that more connected individuals emphasize emancipative values more. In 2012, IC is $M = 2.8$ ($SD = .77$). There is a weak, significant correlation between IC and the EVI, $r = .145$, $p < .01$. In 2017, the average MC is $M = 1.62$ ($SD = 1.01$). There is also a weak significant correlation between MC and the EVI, $r = .134$, $p < .01$.

Table 1. EVI and value gaps in the Netherlands 2012 and 2017.

	2012					2017				
	n	*M*	*SD*	*MD*	*SE*	*n*	*M*	*SD*	*MD*	*SE*
Overall	1854	.61	.17	−.33		2379	.65	.16	−.31	
Innovators	46	.94	.03	0		60	.96	.02	0	
Early adopters	250	.83	.03	−.11*	.00	320	.85	.03	−.11*	.00
Early majority	631	.69	.04	−.25*	.00	809	.73	.04	−.23*	.00
Late majority	630	.54	.05	−.40*	.00	809	.58	.05	−.38*	.00
Laggards	297	.34	.08	−.60*	.01	381	.40	.08	−.56*	.01

Value gaps are measured as mean differences relative to innovators. * Post hoc test Games-Howell, $p < .05$.

To test whether these positive correlations remain significant when controlling for other variables that influence emancipative values, a multivariate regression analysis was performed. A regression model was built with the EVI used as the dependent variable and with IC or MC used as the independent variable while controlling for age, gender, education, household income, ethnicity[2] and religion.[3] Residuals are normally distributed, and there is no lack of homoscedasticity. The models are significant for 2012 $F(15, 1344) = 28.157$, $p < .001$ and 2017 $F(10, 1925) = 58.682$), $p < .001$. The models can be used to predict the EVI. The strength of the prediction is moderate with an explained variance of approximately 23%.

IC and MC continue to have a significant positive, weak association with the EVI in this model (2012: $b^* = .066$, $p = .008$; 2017: $b^* = .113$, $p < .001$). Other significant positive predictors for 2012 include age ($b^* = .054$, $p = .035$), female gender ($b = .046$, $p < .001$) and education ($b^* = .289$, $p < .001$). Significant negative predictors include East Asian ethnicity ($b = -.08$, $p = .009$) and all religious affiliations (varying from reformed churches $b = -.165$ to Roman Catholic $b = -.073$, $p < .001$). For 2017, significant positive predictors include female gender ($b = .046$, $p < .001$), education ($b^* = .196$, $p < .001$) and household income ($b^* = .055$, $p = .012$). Significant negative predictors are age ($b^* = -.097$, $p < .001$) and all religious affiliations (varying from Islam $b = -.18$, $p < .001$ to other $b = -.048$, $p < .001$). All associations for both years are weak. See Appendix C online for an overview of the results.

The models show that significant control variables education, age, gender, ethnicity[4] and religion weaken the relationship between IC and MC and the EVI, but the association remains significant and connectedness to media and other individuals plays a small significant role in emphasizing emancipative values. H2 is thus confirmed.

Communication patterns

Because IC and MC are significant predictors of EVI, the use of their components (news media, face-to-face communication and digital media) between adopter categories will be analyzed further, first in a one-way ANOVA, followed by an ANCOVA to check for the control variables. The first component of IC and MC is the use of news media. H3 states that earlier adopters show more exposure to news media than later adopters. On a four-point scale of exposure to news media, the Dutch score an average of $M = 2.87$ ($SD = .79$) for 2012 and $M = 1.73$ ($SD = 1.14$) for 2017.

[2]Ethnicity was not included in wave 7.
[3]Religion was measured differently in wave 7.
[4]This indicator was only measured in 2012.

The lower scores found for 2017 are explained by the different wording of questions on exposure to media (see the methods section). The assumption of equal variances in the population is violated in 2012, Levene's $F(4, 1839) = 3.811$, $p = .004$, but not in 2017, Levene's $F(4, 2346) = 1.064$, $p = .373$. A one-way analysis of variance (ANOVA) shows a significant difference in news media exposure in both years, 2012 $F(4, 1839) = 6.729$, $p < .001$, 2017 $F(4, 2345) = 7.898$, $p < .001$. In 2012, innovators show the highest exposure to news media ($M = 3.06$, $SD = .64$), followed by the other groups. Planned comparisons confirm the differences. In 2017, this pattern is slightly different; early adopters are exposed to news media the most ($M = 2.00$, $SD = 1{,}16$), followed by innovators and the remaining groups. Planned comparisons show that innovators are not more exposed to news media than the other categories. However, early adopters are more exposed to news media than the early and late majority and laggards. The early majority is also more exposed to news media than the late majority and laggards, similar to the difference between late majority and laggards. The differences stay significant in an ANCOVA controlling for the positive and negative predictors from the regression analysis, 2012: $F(4, 1341) = 3.036$, $p = .017$; 2017: $F(4, 2026) = 7.276$, $p < .001$. H3 is confirmed.

The second component of IC is exposure to face-to-face communication about news. H4 states that earlier adopters are more exposed to face-to-face communication than later adopters and is tested for 2012 only, because exposure to face-to-face communication was not included in the 2017 survey. The assumption of equal variances in the population is violated, Levene's $F(4, 1839) = 16.239$, $p < .001$. On average, the Dutch population scores $M = 2.89$ ($SD = 1.13$) on exposure to face-to-face communication. A one-way analysis of variance (ANOVA) shows a significant difference in the use of face-to-face communication between the five adopter categories, $F(4, 1839) = 10.777$, $p < .001$. As with exposure to news media, innovators are the most exposed to face-to-face communication ($M = 3.18$, $SD = .98$) followed by the rest of the groups. Planned comparisons confirm the significance of the difference. When controlling for positive and negative predictors for EVI the significant difference disappears, $F(4, 1341) = .999$, $p = .407$. Higher education and higher income are the only significant predictors left. H4 is not confirmed.

The third component of IC is exposure to digital media as the internet, mobile phones, e-mail and the second component of MC is social media. H5 states that earlier adopters are more exposed to digital media than later adopters. In 2012, exposure to digital media was operationalized by internet, mobile phone and e-mail used. In 2017, only one question was asked regarding digital media namely exposure to social media, (see the methods section). For both years, equal variances in the population are assumed. On average, the Dutch score is $M = 2.74$ ($SD = 1.28$) in 2012 and $M = 1.33$

(*SD* = 1.35) in 2017. A one-way analysis of variance (ANOVA) shows a significant difference in the use of digital media between the five adopter categories in 2012, $F(4, 1839) = 5.500$, $p < .001$ and in 2017 $F(4, 2354) = 6.670$, $p < .001$. In 2012, innovators and the early majority showed equally high exposure to digital media (both $M = 2.85$, $SD = 1.25$ and $SD = 1.24$ respectively) followed by the rest of the groups. Planned comparisons show that innovators and early adopters do not use digital media more than the other groups. Contrasts between the early majority and the late majority and laggards are significant, and the contrast between the late majority and laggards is also significant. In 2017, innovators and the early majority both scored higher on exposure to social media than the other groups (respectively $M = 1.64$, $SD = 1.34$ and $M = 1.62$, $SD = 1.43$). Planned comparisons show that innovators are not exposed more to social media than the other groups. Early adopters are significantly more exposed to social media than the early majority, the late majority and laggards. The early majority is also more exposed to social media than the late majority and laggards. The late majority is not significantly more exposed to social media than laggards. This picture of exposure to digital and social media and of its influence in emphasizing emancipative values is mixed. It seems that only groups that are moderate in terms of innovativeness use digital media more than innovators, the early majority, and laggards. This was not expected, but confirmed by the ANCOVA, 2012: $F(4, 1341) = 1.551$, $p = .185$; 2017: $F(4, 2033) = 2.558$, $p = .037$). H5 is thus not confirmed for 2012 but is confirmed for 2017. See Appendix D online for an overview.

Mediation analysis

H6 states that the effect of news media exposure on the EVI is mediated by the use of digital media and face-to-face communication. In step 1 of the mediation model, the regression of the use of news media on the EVI, while ignoring the mediator, was found to be significant, showing a direct effect of news media use on the EVI, $b = .019$, $p < .001$. Step 2 revealed the regression of news media use on the mediator digital and face-to-face communication to be significant, $b = .275$, $p < .001$. Step 3 of the mediation process showed the mediator of digital and face-to-face communication, controlling for news media use, to be significant, $b = .015$, $p < .001$. Step 4 of the analysis revealed a significant indirect effect of news media use on the EVI through digital media use and face-to-face communication, $b = .004$, 95% BCa = CI [0.0018, 0.0064], reflecting a very small but significant indirect effect. The use of digital media and face-to-face communication explains a part of the effect that news media use has on the EVI. H6 is thus confirmed.

Conclusions and discussion

This study set out to explore the often-neglected relationship between media use, communication and value change, taking the Netherlands as a case study. More specifically the question was how (news) media exposure and communication are related to the diffusion and distribution of emancipative values in the Netherlands. The results show that the Netherlands became a little bit more emancipated between 2012 and 2017, as the EVI score increased with .04 (from M = .61 to M = .65). This is a small change, but the biggest increase since 1990. Emancipative values have gained increasing support in the Netherlands, especially in the 1980s, leveling off between 1990 and 2012 but showing a further increase in 2017. The adoption of emancipative values develops from an R-shaped curve back to the classical S-shaped curve (RQ1; Rogers, 2003). This could be a generational or cohort effect, a period effect or an effect of economic development or rising education levels.

Another factor in the curve development is media use and communication, as this study shows. There is a small but significant correlation between the use of media and communication and emphasizing emancipative values (H2). The correlation increased with .047 (from b* = .066 to b* = .113), controlled for other predictors. This small effect is in line with typical media effect studies (e.g., Valkenburg et al., 2016) and means that individuals who use media more emphasize emancipative values more than people who use media less.

Through the lens of DOI theory the support for emancipative values varies significantly between the different adoption categories in both years. These differences can be summarized as value gaps. The overall value gap in the Dutch society has decreased a little bit, from −.33 to −.31. In particular, value gaps between the early and late majority and laggards categories became smaller. Still the value gap between the innovators and laggards in the Dutch society is very big, although a little smaller in 2017 (−.56) than in 2012 (−.60).

For media use and communication, the results show that earlier adopters of emancipative values are more exposed to traditional news media than other adopter groups in 2017. Strikingly they traded places with the innovators who were the biggest users of news media in 2012. Early adopters therefore can act as opinion leaders, and all what comes with that, in their communities (H3). This corresponds well with previous DOI research (Kreps, 2017; Rice, 2016; Rogers, 2003; Vishwanath & Barnett, 2011).

The use of face-to-face communication is different than expected based on DOI theory. Contrary to expectations innovators, nor early adopters, use face-to-face communication more than other adoption categories (H4).

Everybody uses interpersonal communication equally in the context of emancipative values.

The uses of digital media are also different than expected in DOI theory. The early majority and laggards use digital media more than the early adopters (H5). When only asked about social media, which was done in 2017, early adapters do use them more than other groups, the innovators included, in line with DOI. These mixed results suggest that groups that are moderate or low in their support for emancipative values, use digital media more than the innovating gatekeepers and the opinion leading early majority. Since the scores on EVI of the moderate groups increased the most between 2012 and 2017 (+.04 for early and late majority and +.06 for the laggards) this might be an indication that in this context the use of digital media strengthens or supports liberal openness-to-change values and not so much conservational values (Besley, 2008). In combination with the equally used face-to-face communication these results might also indicate that, in the context of value change, the merging of mass communication and digital interpersonal communication is taking place (Chun & Soderman, 2011; Danowsku et al., 2011; Walther & Valkenburg, 2017).

Overall, the effect of news media exposure is mediated by face-to-face communication and digital media use (H6). This underlines the positive effect of multimedia use (news media and digital media) and face-to-face communication on emphasizing emancipative values: individuals who are more (informational and media) connected emphasize emancipative values more than people who are less connected. This has not changed between 2012 and 2017.

All this added together we can conclude that media use and communication do affect change in emphasizing emancipative values in the Netherlands. Overall, it is a small positive effect between 2012 and 2017. Applying DOI theory provides a more nuanced and specified picture of the diffusion and distribution of emancipative values and of who uses which media. The innovators seem to be more at a distance from the news media today. The traditional role of the early adopters being opinion leaders and more connected to the news media (and today also to social media) seems intact though, also in this context of value change. Strikingly, digital media are more used by the early majority and laggards. In these groups the positive change in emphasizing emancipative values was also bigger than in the innovators and early majority categories. That being said, laggards in particular still lag considerably behind a lot compared to the innovators and early adopters. For them emancipated values are still an innovation, even though most of the Dutch have embraced them long ago.

Despite the increasing support for emancipative values in the laggards category, the value gap with innovators is still very large. This represents a value gap between the majority of the nonreligious, more educated,

younger and better-connected people and the minority of the religious, less educated, older and less connected people. This gap replaces the traditional religious division between Protestants and Catholics in the Netherlands (Welzel, 2013a). Although 75% of the population perceives increasing polarization on social issues (Den Ridder et al., 2019) this analysis shows that there is no polarization about emancipative values. The normality test, done to answer RQ2, makes clear that the distribution of emancipative values in 2012 and 2017 is not polarized, but is unimodal with one peak. The distribution shows something else though: a long left tail or negative skewness. This means that the group that falls behind in embracing emancipative values is statistically too large for a country such as the Netherlands. The value gaps between the laggards and other groups in society can explain the intensifying experiences of strife between those who are negatively affected by nonemancipative values such as women, gays and libertarians (Aynan et al., 2018; De Roze Leeuw, n.d.; @GaysForFreedom, n.d.) and the laggards who, sometimes militantly, retain religious or nonreligious traditions and orthodoxy (Holdert & Kouwenhoven, 2019; Naber, 2019; Van der Zee, 2019). The results are in line with those of the Netherlands Institute for Social Research (SCP) that stated that there is no more polarization now than in the 1970s (Den Ridder et al., 2019). Probably the issues in the debate are different now compared to the 1970s, and surely the media landscape is different. The public blames (social) media for the polarization, but our results show that a big underlying value gap actually exists in the Dutch society, at least regarding emancipative values. In today's mediatized society (Hjarvard, 2013; Mazzoleni, 2008; Strömbäck, 2008) where media are omnipresent and people live in media (Deuze, 2012), it seems that value gaps cannot be hidden and are more visible than before. How the media report about this, whether they are the culprit for societal conflicts and if the value gap now is bigger than forty or fifty years ago is a question for further research.

We also found unequal variances and high *SD*s in most adopter categories. That is remarkable. Categories with less emphasis on emancipative values show larger *SD*s; i.e., laggards, amongst themselves, agree less on emancipative values than innovators do. This disagreement is essential to change; change agents in regard to championing emancipative values seem to be there, especially in the late majority and laggards categories. This is important information for policymaking to narrow values gaps and reduce tensions in society. The unequal variances, high *SD*s and specific uses of media and communication are the key to get out of the perceived deadlock in the discussions on freedom and social issues connected to emancipative values, such as moral progress (Buchanan & Powell, 2018; Pinker, 2018; Welzel, 2017; TEDx). Digital media seem to be the most effective media to use for late majority and laggards, combined with face-to-face communication.

Many questions remain and further research is needed. Correlation is not causality and questions like whether media content mirrors or molds values of the audiences (Emons et al., 2008, 2009; Mahrt, 2010) or that media content and values are constantly influencing one another and better be conceptualized as reinforcing spirals (Slater, 2007) cannot be answered with these data. Longitudinal content analyses of historical data are necessary for that. Furthermore, it would be interesting to determine what specific media and communication channels the different adopter groups use. By combining EET with DOI theory, an integrated value adoption model that includes media and communication variables as a dimension of modernization can be built.

The Dutch society reached a critical mass of more than 20% of the population emphasizing emancipative values in the 1980s, and further support has grown through education and mass and interpersonal communication. An important challenge for the coming decades will involve the social cross-fertilization of supporting emancipative values in the late majority and laggards categories. Effective uses of media and communication can help to empower and include them more.

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No potential conflict of interest was reported by the author(s).

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References

Aynan, A., Lakerveld, F., Terstall, E., & Yücel, K. (2018). *Manifest of the Free Left*. Stichting Vrij Links Amsterdam. https://www.vrij-links.nl/artikelen/manifest/vrij-links-manifesto/

Besley, J. C. (2008). Media use and human values. *Journalism & Mass Communication Quarterly*, *85*(2), 311–330. https://doi.org/10.1177/107769900808500206

Buchanan, A., & Powell, R. (2018). *The evolution of moral progress*. Oxford University Press.

Centraal Bureau voor de Statistiek. (2020). [Data set] https://opendata.cbs.nl/statline/#/CBS/nl/dataset/37296ned/table?ts=1580807262067

Chun, W. H. K., & Soderman, B. (2011). History of digital media. In W. Donsbach (Ed.), *The international encyclopedia of communication* (1st ed., pp. 2–8). JohnWiley & Sons, Ltd .

Commissariaat voor de Media. (2019). *Mediamonitor 2019*. Hilversum: Commissariaat voor de Media.

Danowsku, J. A., Gluesing, J., & Riopolle, K. (2011). The revolution in diffusion theory caused by new media. In A. Vishwanath & G. A. Barnett (Eds.), *The diffusion of innovations. A communication science perspective* (pp. 123–144). Peter Lang.

De Roze Leeuw [Pink Lion]. (n.d.) *Home*. [Facebook page]. https://www.facebook.com/derozeleeuw/

Den Ridder, J., Miltenburg, E., Huijnk, W., & Van Rijnberk, S. (2019). *Burgerperspectieven 2019* [Civil Perspectives]. The Netherlands Institute for Social Research (SCP).

Deuze, M. (2012). *Media life*. Polity Press.

Emons, P., Scheepers, P., & Wester, F. (2008). Het veranderende gezin. Relaties tussen trends in het gezin in Nederland en de afbeelding in dramaprogramma's op de Nederlandse televisie, 1980-2005 [The changing family. Relations between family trends in The Netherlands and their portrayal in drama shows on the Dutch television, 1980-2005]. *Tijdschrift voor Communicatiewetenschap*, *36*(4), 320–338. https://doi.org/10.5117/2008.036.004.320

Emons, P., Scheepers, P., & Wester, F. (2009). Longitudinal changes in religiosity in Dutch society and drama programs on television, 1980-2005. *Journal of Media and Religion*, *8*(1), 24–39. https://doi.org/10.1080/15348420802670892

European Social Survey. (2018). *Exploring public attitudes, informing public policy*.

EVS. (2020). *European Values Study 2017: Integrated Dataset (EVS 2017)*. GESIS Data Archive. ZA7500 Data file Version 3.0.0 https://doi.org/10.4232/1.13511

Freedom House. (2020). *Countries and territories*. https://freedomhouse.org/countries/freedom-world/scores

Gays For Freedom. (n.d.). *Home* [Facebook page]. Facebook. https://www.facebook.com/GaysForFreedom

Government of the Netherlands. (2020). [Topic] https://www.government.nl/topics/drugs

Haerpfer, C., Inglehart, R., Moreno, A., Welzel, C., Kizilova, K., J, D.-M., Lagos, M., Norris, P., Ponarin, E., Puranen, B. (eds.), (2020). *World Values Survey: Round Seven - Country-Pooled Datafile. Madrid, Spain & Vienna*. JD Systems Institute & WVSA Secretariat. http://www.worldvaluessurvey.org/WVSDocumentationWV7.jsp

Hjarvard, S. (2013). *The mediatization of society and culture*. Routledge.

Holdert, M., & Kouwenhoven, A. (2019, September 11). Allah abhors homosexuality children learn at Islamic primary schools. *NOS*. https://nos.nl/nieuwsuur/artikel/2301278-allah-verafschuwt-homoseksualiteit-leren-kinderen-op-islamitische-basisscholen.html

Holmström, S., Falkheimer, J., & Gade Nielsen, A. (2009). Legitimacy and strategic communication in globalization: The cartoon crisis and other legitimacy conflicts. *International Journal of Strategic Communication*, *4*(1), 1–18. https://doi.org/10.1080/15531180903415780

Inglehart, R. (1997). *Modernization and postmodernization*. Princeton University Press.

Inglehart, R. (2001). Sociological theories of modernization. In N. J. Smelser & P. B. Baltes (Eds.), *International encyclopedia of social & behavioral sciences* (pp. 9965–9971). Elsevier.

Inglehart, R., Haerpfer, C., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., Lagos, M., Norris, P., Ponarin, E., Puranen, B., et al., (Eds.). (2014a). *World Values Survey: Round Six - Country-pooled datafile version*. JD Systems Institute. https://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp

Inglehart, R., Haerpfer, C., Moreno, A., Welzel, C., Kizilova, K., Diez-Medrano, J., Lagos, M., Norris, P., Ponarin, E., Puranen, B., et al, (Eds.). (2014b). *World Values Survey: All Rounds - Country-pooled datafile*.JD Systems Institute. https://www.worldvaluessurvey.org/WVSDocumentationWVL.jsp

Inglehart, R. F. (2018). *Cultural evolution*. Cambridge University Press.

Kreps, G. L. (2017). Diffusion theory in integrative approaches. In Nussbaum, J. (Ed.), *Oxford Research Encyclopedias*. Oxford (UK): Oxford University Press. https://doi.org/10.1093/acrefore/9780190228613.013.251

Mahrt, M. (2010). *Values of German media users, 1986–2007*. VS Verlag.

Mazzoleni, G. (2008). Mediatization of society. *The International Encyclopedia of Communication*, *3*, 3052–3055. https://doi.org/10.1002/9781405186407.wbiecm063

McQuail, D., & Deuze, M. (2020). *McQuail's media & mass communication theory*. Sage.

Naber, C. (2019). *Homohaat manifest radicale christenen wekt woede* [Homohate manifesto radical Christians arouses anger]. Algemeen Dagblad.

Nederlanders hebben het gevoel dat polarisatie toeneemt [Dutch think polarisation is on the rise]. (2019). *NOS*. https://nos.nl/artikel/2278034-scp-nederlanders-hebben-gevoel-dat-polarisatie-toeneemt.html

Pinker, S. (2018). *Enlightenment now*. Allen Lane.

Potter, W. J., & Riddle, K. (2007). A content analysis of the media effects literature. *Journalism and Mass Communication Quarterly*, *84*(1), 90–104. https://doi.org/10.1177/107769900708400107

Rice, R. (2016). Diffusion of innovations. *Oxford Biographies*. https://doi.org/10.1093/OBO/9780199756841-0045

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Slater, M. D. (2007). Reinforcing spirals: The mutual influence of media selectivity and media effects and their impact on individual behavior and social identity. *Communication Theory*, *17*(3), 281–303. https://doi.org/10.1111/j.1468-2885.2007.00296.x

Strömbäck, J. (2008). Four phases of mediatization: An analysis of the mediatization of politics. *The International Journal of Press/Politics*, *13*(3), 228–246. https://doi.org/10.1177/1940161208319097

Valkenburg, P. M., Peter, J., & Walther, J. B. (2016). Media effects: Theory and research. *Annual Review of Psychology*, *67*(1), 315–338. https://doi.org/10.1146/annurev-psych-122414-033608

Van der Zee, R. (2019, July 2). Our freedom back! *HP/DeTijd*. https://www.hpdetijd.nl/2019-07-02/waar-zijn-toch-de-blote-borsten-gebleven/

Vishwanath, A., & Barnett, G. A. (2011). *The diffusion of innovations. A communication. Science perspective*. Peter Lang.

Walther, J. B., & Valkenburg, P. M. (2017). Merging mass and interpersonal communication via interactive communication technology: A symposium.

Human Communication Research, *43*(4), 415–423. https://doi.org/10.1111/hcre.12120

Welzel, C. (2013a). *Freedom rising*. Cambridge University Press.

Welzel, C. (2013b). *Online appendix Freedom Rising*. Cambridge University Press. https://www.cambridge.org/nl/academic/subjects/politics-international-relations/comparative-politics/freedom-rising-human-empowerment-and-quest-emancipation?format=PB&isbn=9781107664838

Welzel, C. (2013c). Evolution, empowerment, and emancipation: How societies ascend the utility ladder of freedoms. *World Values Research*, *6*(1), 1–45.

Welzel, C. (2014). Evolution, empowerment, and emancipation: How societies climb the freedom ladder. *World Development*, *64*, 33–51. https://doi.org/10.1016/j.worlddev.2014.05.016

Welzel, C. (2017, January 17). *Moral progress: Expanding the human mind* [Video]. YouTube. TEDx Leuphana University Lüneburg. https://www.youtube.com/watch?v=qesLGw23_zQ

Weyers, H. A. M. (2002). *Euthanasie: Het proces van rechtsverandering*. [The process of legal change]. s.n.

World Values Survey. (2015). *Crossings by country 2010-2014*. Study # 906-WVS2010 v.2015.04.18. http://www.worldvaluessurvey.org/WVSContents.jsp

World Values Survey. (2020). *Who are we, what we do, wave 7. Findings & Insights. Data & Documentation*. http://www.worldvaluessurvey.org/WVSContents.jsp