(Un)informed consent in Psychological Research: An empirical study on consent in psychological research and the GDPR

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Abstract. In many instances, psychological research requires the collection and processing of personal data collected directly from research subjects. In principle, the General Data Protection Regulation (GDPR) applies to psychological research which involves the collection and processing of personal data in the European Economic Area (EEA). Further, the GDPR includes provisions elaborating the types of information which should be offered to research subjects when personal data are collected directly from them. Given the general norm that informed consent should be obtained before psychological research involving the collection of personal data directly from research participants should go ahead, the information which should be provided to subjects according to the GDPR will usually be communicated in the context of an informed consent process. Unfortunately, there is reason to believe that the GDPR's obligations concerning information provision to research subjects may not always be fulfilled. This paper outlines the results of an empirical investigation into the degree to which these information obligations are fulfilled in the context of psychological research consent procedures to which European data protection law applies. Significant discrepancies between the legal obligations to provide information to research subjects, and the information actually provided, are identified.

Keywords: psychology, research, psychological research, data protection, open access, consent, informed consent, information obligations, ethics

1. Introduction

Psychological research often involves empirical methodologies based on the collection, and subsequent processing, of personal data from human research subjects. In order to conduct such research, the norm is that psychological researchers require the informed consent of the subjects on whom the research will be conducted.

Informed consent, however, is only legitimate if certain conditions are fulfilled. One set of such conditions concerns the adequate provision of information to subjects about the proposed research. Only if a subject understands what the research entails, can they make an informed decision as to whether they want to support the research and as to whether they want to accept associated risks.

In turn, the specification of these information provision conditions is not left solely to the psychological researchers involved in a study. Rather, specifications of conditions are elaborated in external normative frameworks relevant for psychological research. These frameworks take two different forms: ethical frameworks; and legal frameworks.

In Europe, data protection law, as elaborated under the General Data Protection Regulation (GDPR), is applicable to psychological research involving the collection and processing of personal data from human subjects. In turn, the GDPR elaborates, in particular in Article 13 and associated authoritative guidance, a specification of the forms of information which must be provided to research subjects to ensure that they are 'informed' as to what research processing will entail.[1]

Simply as law outlines such information provision obligations, however, does not mean they will automatically be fulfilled in research practice. Indeed, there is some reason to think that the opposite is true – for example, from practical experience, we have doubts that the majority of psychological researchers designing consent materials have in-depth training in the specifics of data protection law.

There is, however, little work available on whether, and to what degree, consent procedures in psychological research fulfil the information provision conditions outlined in the GDPR – let alone work which provides granularity as to the ways in which these conditions are not being fulfilled. This paper seeks to address this gap and seeks to answer the following research question:

To what degree do consent processes in psychological research in Europe fulfil the requirements specifying the forms of information which must be provided to research subjects under the GDPR – in particular in Article 13 and in associated authoritative guidance?

The paper begins by providing a brief background to the subject of study. In this regard, the paper: elaborates the aims, methods, and data processing involved in psychological research (section 2); elaborates the norm, and the importance, of informed consent in psychological research (section 3); and discusses the requirements outlined by the GDPR – in particular in Article 13 and associated authoritative guidance – concerning the forms of information to be provided to research subjects in consent in psychological research (section 4).

The paper then moves on to discuss the method by which data were collected in the study to provide an empirical base from which answer the research question. In particular, the paper discusses the collection

[1] We would highlight that there are other provisions in European data protection law which relate to other aspects of the provision of information to research subjects. For example, Article 12 GDPR elaborates conditions concerning the modalities of information provision.

of relevant research papers and associated consent materials, and the process by which papers and materials were coded according to relevant legal criteria in the GDPR (section 5).

The paper then moves on to discuss the results. The paper first provides an overview and discussion of the results of coding (sections 6 and 7). The paper subsequently proceeds to provide a more detailed discussion of specific types of issues encountered during the coding process. These include issues concerning: the inadequate provision of information (section 8); terminological misalignment (section 9); and the structuring of information (section 10).

The final substantive section of the paper then concerns a proposition for how the identified issues might be addressed moving forward. In this regard, we highlight the utility of practical guidance which might be used by psychological researchers in drafting consent materials, and briefly describe our efforts at putting such practical guidance together (section 11).

2. Psychological Research

We begin by providing a brief overview of the aims and methods of psychological research, of the forms of data about human subjects which might be collected to conduct this research, and of how these data might be consequently processed following collection.

Psychological research essentially constitutes a field of scientific enquiry which aims to add knowledge to, or to add knowledge by using, the science of psychology – the science concerning, broadly speaking, the functioning of individual and social cognitive processes, affective responses, and behaviours. In this regard, forms of inquiry in the field include: those aimed at providing descriptive templates for human behaviour; those aimed at producing explanations as to how and why individual or social behaviour occurs; and those aimed at allowing predictions for human behaviours based on known conditions, from which then, depending on the domain of study, interventions are derived. Psychological research may also produce insights which might be of assistance in relation to the clarification or resolution of problems external to the discipline – for example concerning ways in which perpetrators of crime might be best dealt with (see, e.g.: Bourke et. al, 2013). Research in this field can involve a range of different forms of methodological approach, including longitudinal studies, case studies, laboratory and field experiments, and observational surveys.

In many cases, psychological research will take an empirical approach involving the collection of data directly from research subjects.

There is a broad range of ways in which data might be collected to support such an approach. These include: approaches which directly measure physiological states – for example approaches involving the use of Electroencephalogram (EEG), Magnetic Resonance Imaging (MRI) and Transcranial Direct Current Stimulation (tDCS); approaches involving directly questioning subjects; and approaches involving monitoring subjects' performance in tasks, purposely designed environments, or natural surroundings. There is also a broad range of forms of data about subjects – in terms of semantic content – which might be collected to support such approaches. These include physiological measurements, health, social or demographic data, and context specific data – such as data concerning preferences or feelings which emerge in relation to a set scenario (see, e.g.: Mashek et. al., 2000). Neither the range of current means of data collection, nor the range of forms of data which are currently collected, are exhaustive. Novel means of data collection and novel forms of data which may be collected seem liable to appear in future as psychological research changes over time. Given the inherent uncertainty present in the research endeavour, it is, however, impossible to predict such changes in advance.

The data collected from research subjects may then be subsequently processed in a variety of ways depending on the aims and method of a study. In the first instance, data may undergo certain processes – such as pseudonymisation – and be subject to certain safeguards – such as security safeguards – such that research subject rights are protected.[2] During the course of research, data may be subject to analysis aimed at producing inferences about individual subjects – although the production of unintentional inferences, such as incidental medical findings, is also possible – as well as scientific results relevant to the study.[3] Beyond study-internal processing aimed at generating results, data may also be subject to subsequent processing operations. Such operations include:

[2] We appreciate certain concepts mentioned here have specific meanings in, and are the subject of considerable discussion in relation to, data protection law. Whilst the discussion in this section does not specifically relate to data protection law, we will return to the discussion of concepts discussed here, where relevant, in relation to data protection law, later in the article – for example in section 9, in relation to the concept of pseudonymity.

[3] In relation to incidental findings, the American Psychological Association, for example, observes: 'A prominent example of an incidental finding is an unexpected abnormal finding, such as a brain tumor, on a research neuroimaging scan of a volunteer. This issue can occur in many other psychological research settings, including cognitive research (e.g., unexpectedly low memory scores in a control participant), mental health research (e.g., unexpected psychotic symptoms endorsed on a rating form by a research participant), or research that includes biochemical, molecular, or genomic testing' (APA Committee on Human Research 2011).

publication – in identifiable, pseudonymous, anonymous, or aggregate form; use in further research associated with the project; use in further research unassociated with the project; and even use for other purposes – such as for the purposes of checking the legitimacy of research methodologies or for law enforcement. Indeed, certain organisations with a significant role in the research data ecosystem – for example certain of the European Institutions in their Open Science policies – explicitly encourage a variety of forms of data sharing.[4]

On the back of this brief overview of psychological research, and the data collection and processing this might entail, we now move to discuss the relationship between psychological research and informed consent.

3. Psychological Research and Informed Consent

In this regard, we would, in particular, highlight the general norm of informed consent in psychological research, the significance of the norm, and how the norm ought to be specified and clarified in each instance in which consent is obtained.

There is a general norm that – whenever psychological research is to be conducted involving human subjects – potential participants are asked for their informed consent and that only those individuals who provide their consent are then engaged as research subjects.[5] There are variations as to how consent must be obtained. For example, research on certain subjects may function on the basis of proxy consents – for example research involving children.[6] There are also certain exceptional situations in which it may not be necessary to obtain fully informed consent in order to proceed with the research – for example, in the case of certain instances of research involving deception, it may be impossible to inform individuals as to the specifics of research in advance, making it impossible to obtain subjects' fully informed consent.[7] These

[4] See, for example: (Regulation (EU) 2021/695, 2021). See also, on data sharing and research: (Burgelman et al., 201); (Giglia, 2019); (Paseri, 2021).

[5] See, for example, Paragraph 7(7.3)(3)(a) of the German Psychological Society's Professional Ethics Guidelines: 'Voraussetzung dafür, dass Psychologinnen und Psychologen persönlich, auf elektronischem Weg oder mit Hilfe anderer Kommunikationsformen Forschung durchführen, ist die persönliche Einwilligung der an der Forschung teilnehmenden Personen' (Deutsche Gesellschaft für Psychologie, 2016).

[6] See, for example, Paragraph 7(7.3)(3)(b) of the German Psychological Society's Professional Ethics Guidelines (Deutsche Gesellschaft für Psychologie, 2016).

[7] See, for example, Paragraph 7(7.3)(8) of the German Psychological Society's Professional Ethics Guidelines (Deutsche Gesellschaft für Psychologie, 2016).

variants and exceptions, however, do not serve to undermine the fact that a general norm exists.

The norm that informed consent should be obtained in order to conduct psychological research on human subjects is not simply an arbitrary concretisation of practice. Rather, it is integral to the normative definition of roles and relationships in the psychological research endeavour. When informed consent is requested from an individual and respected, this represents the normative assumptions that: i) the individual from whom consent is obtained is recognised as an autonomous entity capable of making decisions which should be respected; ii) the individual is recognised as having rights concerning their ability to choose whether they wish to be engaged in the proposed research – both in light of their evaluation of the goals of the research and its potential risks; and iii) the autonomy of the individual, and their attendant rights in research are not subject to being overridden by third party interests in the research going ahead – for example those of the researchers, funders, or even society in general (see e.g.: CIOMS and WHO, 2016). In other words, obtaining consent also signifies psychology's understanding of individuals as research participants, and not mere sources of data.

The question as to specifically what it means to provide informed consent in any given situation, however, is not left completely to the psychological researchers designing consent processes to decide. Rather, external requirements are also relevant. Such external delineations of requirements ensure, in the first instance, that current knowledge and understandings of what constitutes a fair provision of information to a research subject concerning their participation in research – and what does not – are taken into account in each context. Such external requirements also provide a common frame of reference for psychologists and research subjects. They allow research subjects to understand the approach of the psychological researchers and to recognise these are behaving in line with objectively accepted practices. Common frameworks are thus also important for subjects, and potential subjects, to trust individual psychological researchers, as well as psychological research as a whole. Two such common frames of external reference deserve specific mention: ethics; and law.

One area of law which is relevant for the definition of the conditions of informed consent in relation to psychological research in Europe is data protection law. It is to the relationship between this area of law and informed consent in psychological research that we now turn.

4. Psychological Research, Informed Consent, and European Data Protection Law

The key legal instrument defining modern data protection law in Europe is the GDPR. The GDPR came into force - with much fanfare - in 2016 and has applied since 2018 (Regulation (EU) 2016/679).

The GDPR applies, in principle, across a broad range of contexts involving the processing of personal data. These contexts include the processing of personal data for scientific research – indeed, there are even specific provisions in the GDPR related to the processing of personal data in scientific research, for example Article 89 (see, e.g.: Hallinan, 2021; Quinn, 2021; Staunton et. al., 2022). In this regard, there is little question that the GDPR can apply, in principle, to psychological research when this involves the processing of research subjects' personal data. The applicability of the GDPR to psychological research, as well as the implications of this applicability, have even been the subject of discipline specific scholarly consideration. For example, in the journal Psychology and Health, Crutzen et. al. discuss 'why and how we – as researchers within the field of health psychology – should care about the GDPR' (Crutzen et. al., 2018). When the GDPR applies, a range of provisions, elaborating substantive obligations in relation to psychological research, also apply.

Certain of these obligations concern the provision of informed consent in psychological research. Within this set of obligations, there is a subset of obligations which relates to the forms of information which must be provided to the research subject – such that the subject may understand how their personal data will be processed as a result of participating in research, as well as the potential consequences of this processing.[8] Significantly, these provisions are applicable regardless of whether consent, or another legal basis, constitutes the legitimation for processing under the GDPR.[9] Accordingly, these provisions will also be relevant to consent procedures whose rationale does not stem from EU data protection law – e.g. consent procedures whose rationale

[8] We recognise that these obligations may also be relevant in instances in which personal data is processed in psychological research which is conducted without informed consent. Whilst this would be an interesting subject of further study, such research is out of the scope of this article.

[9] All processing of personal data which falls within the scope of the GDPR requires legitimation according to one of the grounds laid out in Article 6(1) and, for sensitive data, also according to one of the grounds laid out in Article 9(2). Consent is listed as a possible legitimating ground in both Article 6(1) and Article 9(2), but is not the only possible legitimating ground relevant for psychological research.

stems from research ethics.[10]These provisions appear in general form – for example the general transparency obligation identifiable in Article 5(1)(a). These provisions also appear in more specific form, elaborating specific types of information which must be provided to the research subject. The key provision in this regard is Article 13. Authoritative guidance then provides further clarification of the types of information which need to be provided – especially concerning the need to provide information as to the types of personal data which will be collected and used (see: Article 29 Working Party, 2018; European Data Protection Board, 2020). Article 12 further clarifies that, where information is provided, it must be in a 'concise, transparent, intelligible and easily accessible form'. Authoritative guidance further clarifies that all information should be provided such that it is actually useful for individuals to understand what will happen in relation to their personal data in a given context (see. e.g.: Article 29 Working Party, 2018).[11] Whilst it is, technically, true that these provisions do not specifically refer to information provision in the context of an informed consent process, in practice, it is within the context of the informed consent process that the obligations will be discharged.

Given that the GDPR elaborates conditions concerning the types of information which must be provided to individuals in consent procedures in psychological research, one might presume that these types of information would always be provided in consent procedures in psychological research. Simply as the law states something should be so, however, does not necessarily mean this will be the case in reality. In this regard, from practical experience in the field – two of the authors are psychological researchers – we have reason to doubt that psychological researchers responsible for drafting consent materials will always have legal training – much less specific training in data protection law – such that they are aware of the relevant data protection provisions or how they should be fulfilled. We also, again on the basis of practical experience in the field, have reason to doubt that psychological researchers will always have access to expert consultants to

[10] In certain cases – for example owing to differences in how consent is understood in data protection law and other areas of law or ethics – research may proceed on the basis of a legal ground in data protection law apart from consent, whilst consent is still sought from the data subject and required in order to proceed with research by virtue of some other form of norm – e.g. an ethical norm (see, e.g. the discussion in: European Data Protection Board, 2019).

[11] For example: 'A central consideration of the principle of transparency outlined in these provisions is that the data subject should be able to determine in advance what the scope and consequences of the processing entails and that they should not be taken by surprise at a later point about the ways in which their personal data has been used' (Article 29 Working Party, 2018).

verify their own materials, or even access to external materials, such as consent templates, which might be used to ensure obligations under data protection law are met – see section 10 for a further discussion. In light of the above doubts, we hypothesized that consent forms used in psychological research in Europe would routinely fail to fulfil conditions concerning the types of information to be provided to research subjects outlined under the GDPR.

This led us to the central question addressed by this paper: To what degree do consent processes in psychological research in Europe fulfil the requirements specifying the forms of information which must be provided to research subjects under the GDPR – in particular in Article 13 and in associated authoritative guidance? Unfortunately, there seems to be, to date, little work aimed at providing a well-founded answer to this question. To address this gap, we conducted a preregistered study based on the following methodology.[12]

5. Method

The method used is outlined in detail in the preregistration, which has been published and is available to download (Elson et. al., 2021). In this regard, the following constitutes only a brief summary of the method and all readers interested in more detail are directed to the preregistration. The method we used essentially consisted of three steps: i) raw data collection; ii) coding of raw data; iii) analysis of results. The following constitutes a brief overview of the first two steps.

The raw data collection included the collection of research papers in psychology as well as their attendant consent materials – consent forms and any other documentation concerning the provision of information to research subjects. In this regard, a population of potential research papers was identified, from which a random sample of papers was screened according to certain criteria. Papers were only selected if: they were published in a peer reviewed journal; they were published after 06/2019; they were published in English; they concerned empirical studies on human adults; they related to research conducted within countries in which the GDPR – or a GDPR equivalent – applies;[13] they related to research conducted in a country in which a language understood by the authors is spoken – i.e. English, German, French,

[12] preregistration is essentially the definition, and submission to a public registry, of a research plan – hypothesis, methodology, etc. – of a study, prior to the conduct of the study.

[13] Papers from the UK were also included. For a justification see (Elson et. al., 2021).

Swedish or Dutch; they involved the collection of personal data; they related to research conducted in a country subject to the GDPR – or a GDPR equivalent; they related to a data collection process which was completed after May 24th 2016; they did not involve secondary data; and the available information was adequate to justify selection. In a subsequent step, authors of relevant papers were contacted and asked to confirm the eligibility of their paper for the study and to provide all relevant informed consent materials. Authors of selected papers were contacted until at least 100 sets of papers and consent materials were received. Papers and materials received after this point, but prior to beginning analysis, were also included in the evaluated data-set. Eventually, 101 sets of papers and consent materials were included in the analysis.

The raw data – papers and consent materials – were then coded – read, and defined in relation to a specific, pre-given, set of criteria or values – in two steps. In the first step, the research papers were coded according to a list of relevant values. These values predominantly concerned factors relating to the use of personal data in studies. These included: bibliographic information; sample size and sample information; data processed and methodology used; whether sensitive data were processed; mode of data collection; mode of data storage; and degree of access to data. In the second step, the consent materials were coded according to a subsequent list of values based on the types of information which should be provided to research subjects under the GDPR – drawn up from Article 13 and associated authoritative guidance. These coding values included: information concerning the identity and contact of the controller; the legal basis used for processing; the types of personal data processed; the purposes and details of data processing; the list of possible recipients of data – both within and outside the study; plans to transfer data outside the EU; periods of data storage; and rights retained by research subjects. For interested readers, a full list ofthe coding values will be shared – in anonymous form – on PsychArchives.org, for the purposes of this article, the relevant coding values are listed in the results table in section 6, below. Throughout both steps of the coding process, supplemental notes were made on papers and consent materials concerning their adherence to requirements concerning the provision of information to research subjects under the GDPR.

The two steps of coding provided a broad range of information which allowed us to draw conclusions concerning the research question. Two forms of conclusions could be drawn. First, information gathered via the coding process allowed comparisons to be drawn between the types of information provided to subjects in collected materials and the types

of information required to be provided to subjects under the GDPR – in particular according to Article 13 and associated authoritative guidance. Second, the careful reading of the papers and consent materials allowed the identification of specific issues – concerning the provision of information to research subjects in relation to the conditions of the GDPR – which were not directly identifiable from the coding process.

The raw data collection process came to an end in 02/2022. Both aspects of the coding process were completed in the same month. We consider the results to provide significant insights into the degree to which legal requirements concerning the provision of information to research subjects in the GDPR are taken into account in informed consent procedures in psychological research. In the following sections we go deeper into the results.[14]

6. Overview of Results of Coding

We begin by offering, in Figure 1, a table consisting of a consolidated version of the results of the coding process of consent materials. The table does not reflect the full range of data collected in the coding process or the full range of coding values used.[15] The table does, however, contain a top-level depiction of data collected, aimed at offering the reader an easily accessible overview of relevant results.[16]

[14] Please note that another paper, primarily directed at a psychological audience, presenting analyses concerning the consistency of what research participants gave consent to, and what actually happened in the research, is forthcoming.

[15] We would highlight that the coding process is not infallible and that it cannot be ruled out that mistakes appear in the table. Mistakes may have come, for example, in the form of inconsistent application of coding values throughout the duration of coding, from the accidental input of false values into the original coding table, or even from an inaccurate calculation of consolidated results from original results. Despite this caveat, we would nevertheless highlight that every effort was made to avoid errors.

[16] Full results will be shared, in anonymous form, on PsychArchives.org.

	Coding Values			
	Information Provided	Information Not Provided	Indeterminate	Not Applicable
Controller Named[1]	13	8	80	NA
Controller Contact[2]	17	76	NA	8
Data Protection Officer Named	11	90	0	0
Data Protection Officer Contact	11	0	NA	90
Legal Basis Provided	8	93	0	NA
Where Legal Basis Legitimate Interest, Which Interest	1	0	1	99
Forms of Personal Data Collected	82	6	13	NA
Forms of Data Generated[3]	1	98	2	0
Purpose of Processing Defined as Solely for the Study[4]	18	75	8	NA
Purpose of Processing Defined as for Other Research Beyond Study[5]	13	74	14	NA
Purpose of Processing Defined as for Other than Research[6]	11	89	1	NA
Details on Purposes and Processes of Study	86	11	4	NA
Details on Publication of Personal Data	5	48	11	37
Categories of Recipient within Study[7]	13	86	2	NA
Categories of Recipient outside Study[8]	15	80	2	4
International Transfers Foreseen[9]	2	96	3	0
Risks and Safeguards of Transfers[10]	0	5	0	96
Storage Period[11]	39	62	NA	NA
Right of Access[12]	17	81	3	0
Right of Rectification	12	89	0	0
Right of Erasure	44	53	4	0
Right to Restrict	7	94	0	0
Right to Object	7	94	0	0
Right to Portability	3	98	0	0
Right to Withdraw Consent	81	8	12	0
Right to Complain to a Supervisory Authority	8	92	1	0

Types of Information to be Provided According to EU Data Protection Law

Figure 1. Consolidated Results of Coding[17]

[17] Notes on Table 1: 1. In numerous cases, a contact person/institution was named in the consent materials without being specifically identified as the controller. In such cases, consent materials were listed as providing indeterminate information - although it may be that, in many cases, the listed contact person/institution was indeed the controller. 2. Following on from pt. 1, many materials in which a contact person/institution was named also provided contact details. As it was not clear whether the contact person/institution was the controller, however, these materials have been listed as not providing contact information for the controller. 3. 'Forms of data generated' refers to the provision of information concerning novel forms of data about research subjects which may be generated in the course of research via analysis of collected data. In many cases, such data may not have been generated at all. 4. In this case: 'information provided' means consent materials indicated that collected data would only be used for the study; 'information not provided' means

In the following, we proceed to provide a more detailed discussion of issues identified in the coding process. We begin with a discussion of the issues identifiable from the top-level results of coding displayed in the table.[18]

7. Discussion of Results of Coding

In the first instance, from the consolidated results in table 1, it is clear there are significant discrepancies between the types of information which should be provided according to the GDPR, and the information actually provided in consent materials. Discrepancies appear across the range of types of information represented in coding values. Across many of the coding values, the majority of evaluated sets of consent materials showed themselves to be incomplete. Indeed, there are, in this regard,

that consent materials did not specifically indicate that collected data would only be used for the purposes of the study. 5. In this case: 'information provided' means consent materials indicated that collected data would be used for purposes of other research beyond the study; 'information not provided' means that consent materials did not specifically indicate that collected data would only be used for the purposes of other research beyond the study. 6. In this case: 'information provided' means consent materials indicated that collected data would be used for purposes outside research; 'information not provided' means that consent materials did not specifically indicate that collected data would be used for purposes outside research. 7. In certain cases, it may have been that there were so few researchers with access to materials, or that all researchers with access to the materials were essentially equivalent from the perspective of processing, that there was no need to provide information in consent materials. 8. In certain cases, possible external recipients may have been listed, whilst there was no guarantee that these recipients would ever actually receive data, or that the recipients would receive data as part of the purposes of processing. 9. In this case, consent materials indicated that personal data may be transferred abroad without specifically clarifying where possible recipients were located. These consent materials were classified as 'indeterminate' as it was not clear if the recipients were in the EU or not. 10. In relation to consent materials coded as 'indeterminate' in relation to 'international transfers foreseen', where these materials did not subsequently mention risks and safeguards, they were coded as 'information not provided'. 11. 'Storage period' refers to both the provision of information concerning a specific time period for storage as well as to the provision of information clarifying criteria defining when personal data will be deleted. 12. Concerning certain of the rights coded, it is possible that consent materials related to research studies in relation to which rights did not apply – e.g as a result of the applicability of national law derogating from the GDPR. There was little indication in consent materials, however, that this was the case. Accordingly, in all cases where rights were not mentioned, consent materials were coded as 'information not provided'.

[18] The methods used in evaluating the results of coding were relatively straightforward and simple. We consider it may be valuable, and yield subsequent insight, to subject the results to a further, more advanced, analysis.

only a limited range of coding values in relation to which a clear majority of consent materials provide the required information to research subjects. For example, the majority of consent materials clearly provide information to research subjects concerning the purposes of processing – 86 out of 101 sets of consent materials.

Looking in more detail at the results of the coding, we see several coding values in relation to which large majorities of consent materials appear lacking. For example, very few sets of consent materials included information for research subjects concerning the legal basis under data protection law which justified processing – only 8 out of 101 sets of consent materials provided this information. In a further example, very few sets of consent materials included information for research subjects concerning the right to data portability or the right to complain to a supervisory authority – only 3 out of 101, and 8 out of 101, sets of consent materials respectively provided this information. In a final example, very few sets of consent materials provided information for data subjects concerning the contact information of a data protection officer – only 11 out of 101 sets of consent materials provided this information.

In certain cases, legitimate reasons may exist which explain why certain types of information were not provided in consent materials. For example, it is possible that international transfers were simply not foreseen in the vast majority of studies we evaluated and, accordingly, that there was no need for consent materials to indicate that international transfers would take place – only 5 out of 101 consent materials provided information concerning international transfers. However, legitimate reasons for a common lack of provision of information are not always easy to identify. For example, it is hard to find legitimate reasons as to why consent materials would not provide information concerning the right to complain to a supervisory authority – the obligation is clearly listed in Article 13(2)(d) of the GDPR and there are few exceptions to the obligation which seem likely to have broad applicability to psychological research. Therefore, while there may be legitimate reasons not to provide certain information in specific cases, it is doubtful as an explanation for a general lack of information across a larger number of papers.

Whilst the results of coding already show deficits in the consent processes we evaluated, there were other issues prevalent across consent materials which were not directly reflected in the results of coding, but which became evident via the careful reading of consent materials. These issues might be broken down into three groups, each of which will be discussed in the following sections.

7.1. Discussion of Specific Issues 1: Provision of inadequate information

In the first instance, the inadequate provision of information was prevalent across materials. Two forms of such inadequate provision of information deserve particular discussion. First, there were cases in which misleading, or simply incorrect, information was provided to research subjects. In these cases, the provision of information served only to misinform subjects as to the processing potentially involved by participation in a study, and as to the consequences of participation in a study. For example, in certain consent materials we found categorical statements to the effect that research subjects' personal information would never be provided to third parties outside the research context. Yet, laws in relevant jurisdictions did appear to foresee the possibility for certain third parties, under certain circumstances, to access psychological research data without researcher permission – for example in Germany.[19] Although such access by authorities may be a rare and even unlikely event, depending on the nature of the data collected, we found ourselves sceptical of the ability of researchers to legitimately promise confidentiality to such a degree – see, for a discussion on the possibility of law enforcement access in relation to research materials (Dranseika et al., 2016).

Concerning the misleading provision of information, we encountered a special form of research methodology which deserves mention: research involving deception – research, the success of which requires that subjects are deceived as to the aim, or aspects of the aim, of research. Where personal data is processed, this methodology seems difficult to reconcile with the information provision conditions outlined in data protection law – there is no provision under Article 13 which obviously facilitates the deception of a subject. Indeed, this issue has been specifically highlighted by the European Data Protection Supervisor (European Data Protection Supervisor, 2020).[20] There are normative

[19] With this observation, we do not intend to suggest that such laws themselves are necessarily problematic or illegitimate – the GDPR does include, for example, a number of opening clauses which allow Member States to derogate from its provisions under certain conditions, and which could be relied upon to legitimately pass such laws. See, for example, the recent German case concerning the ability of researchers to preclude law enforcement access to data which was decided against the researcher (OLG München, 2020). We concede it is possible, in certain circumstances, that claims may have legitimately been made.

[20] In deception, subjects normally know they are observed, but do not know the real objective. Such cases of manipulation are often discouraged by ethics boards, but nevertheless is still used in some selected projects. In such cases, debriefing of the research participants and retrospective informed consent along with specific ethics

approaches proposed for dealing with the use of deception in psychological research – outlined in certain applicable ethics instruments, for example (See, e.g.: The British Psychological Society, 2021). In our opinion, however, these approaches do not address the pertinent legal questions. We thus see an urgent need for further research on the relationship between this research methodology and data protection law.[21]

Second, there were cases in which insufficient information was provided to research subjects to allow them to understand the proposed research or the consequences of research – i.e. whilst some information of a required type was provided, this information was deficient in terms of detail to facilitate subject understanding. For example, numerous cases were evident in which, whilst the right to withdraw consent was specifically mentioned, information as to the consequences of withdrawal for the further processing of personal data were conspicuously absent – and what use is knowing one can withdraw without knowing what this entails. We also encountered several cases in which only general statements as to the relevant conditions under which personal data would be processed were offered – for example, statements to the effect that personal data would be processed in line with applicable data protection laws. Whilst the layered provision of information may, in certain cases and under certain conditions, be acceptable – e.g. where a top-level description of relevant information is provided along with a link to a single document in which clear and context specific information is offered – such general statements, which require research subjects to hunt for relevant information themselves, are not permissible (see, e.g.

approval before the start of the research are among the measures to ensure ethics compliance. These practices have been suggested to directly conflict with the right to information under data protection law on the basis that there are no derogations to the principle of transparency under Article 13, where information from participants is collected directly by researchers (see European Data Protection Supervisor, 2020).

[21] This article is not the place for a detailed discussion of this issue. However, and bearing in mind that we make no assertions concerning the ethical legitimacy of this form of research, we would suggest the following two lines of approach as potentially fruitful in practically bridging the discrepancy between psychological research practice and data protection law: i) investigation of the utility of national law in providing derogations from Article 13 – for example under Article 23 or 85 – to facilitate such research; and ii) investigation of the possibility to provide information concerning the purposes of processing to the research subject under Article 13 at a more general level – e.g. 'psychological research which be conducted will in line with common psychological research practise' – in line with the possibilities outlined in Recital 33, and then considering the provision of deceptive information as constituting an aspect of research methodology unconnected with Article 13 – i.e. as concerning information not directly related to the purpose of processing as such and which therefore need not be provided under Article 13.

the discussion in: Article 29 Working Party, 2018, see also, for a broader discussion on the adequate provision of information under the GDPR in scientific research: Ducato, 2022).

7.2. Discussion of Specific Issues 2: Terminological misalignment

n turn, across materials, a common theme was the misuse of terminology with specific and defined meanings in European data protection law. Naturally, should there be a legal term relevant for the provision of information to research subjects used in a consent procedure, this term should be used consistently in line with its legal meaning. This misuse occurred, in particular, in relation to three legal concepts used to classify the identifiability of data: personal data; pseudonymous data; and anonymous data. Each of these three terms is defined in data protection law: personal data in Article 4(1) of the GDPR – essentially as any data which can be used alone or in combination with other types of data to identify an individual person; pseudonymous data in Article 4(5) of the GDPR – essentially as personal data which have undergone pseudonymisation; and anonymous data in Recital 26 of the GDPR – essentially as any data which cannot be classified as personal data. Where these terms were misused, it was difficult to understand when personal data would be processed in a study. This made it difficult to understand and evaluate the scope and consequences of processing of personal data in a study – even when other required forms of information were provided.

The misuse of these terms took two different forms. First, misuse took the form of adoption of definitions for terms which simply diverged from their definition in European data protection law. For example, we encountered several cases in which consent materials stated that only anonymous data would be processed, whereas it was clear from the research methodology and process description in associated papers that personal data would be processed. Equally, we encountered cases in which consent materials suggested only anonymous data would be processed whilst also explaining that data would be pseudonymised – indicating the use of the term anonymised synonymously with pseudonymised. Second – and sometimes overlapping with the first form of misuse – misuse took the form of contradictory uses of terms. For example, we encountered consent materials which asserted that only anonymous data would be processed and then proceeded to state that data protection law applied and that data subjects would retain rights in data – anonymous data do not fall within the scope of data protection law and it is unclear how a subject could retain rights in

data which cannot be attributed to them. Equally, we encountered several sets of consent materials in which the same data sets were referred to, in different places, as constituting personal data and anonymous data.

We would highlight at this point that researchers' apparent confusion in relation to the concepts of personal data, pseudonymous data and anonymous data is not unique in relation to psychological research. This confusion is an issue which has also been identified as problematic in relation to other forms of research – for example biomedical research. The cause of the issue in the research context is perhaps the range of sources relevant to research which propose divergent definitions for concepts of identifiability (see, for example, discussions in: Elger et. al., 2006). Uncertainty as to the specific definitions of the terms also appears in legal scholarship around data protection law itself (see, e.g.: Purtova, 2018; Mourby et.al., 2018; Stalla-Bourdillon et. al., 2016). And, finally, confusion may arise from conflicting meanings of this term in everyday life, where simply not currently knowing someone's identity – e.g., the author of a comment on a message board – may be considered anonymity. These observations, however, do not constitute broad excuses for the misuse of data protection terminology in consent in psychological research. Whilst there may be differing sources for the terms, there is no reason that the existence of these sources should lead to the adoption of definitions which diverge from those offered under applicable law. Equally, whilst there may be discussions ongoing in relation to the specifics of definitions of terms in data protection law, these discussions tend to deal with uncertainties at the boundaries of terms, and can justify neither the adoption of definitions obviously diverging from those provided in law, nor for the inconsistent use of terms in consent materials.

7.3. Discussion of Specific Issues 3: Structuring of Information

Finally - and moving slightly away from the requirements of Article 13, and into the realm of the requirements elaborated in Article 12 – issues concerning the structuring of the provision of information were prevalent. These issues made it difficult to order the information which was provided, and thus hindered effective understanding of this information. In this regard, we encountered several cases in relation to which multiple different consent materials – consent forms, participant information, as well as, on occasion, other types of consent materials – or consent materials of extensive length, were given to research subjects as part of the consent process – similar issues have been encountered

beyond psychological research as well (see, for example: Cate et. al. 2013). In many such cases, types of information required by the GDPR were spread across provided materials. In relation to certain such sets of materials, this spread of information was unproblematic. In relation to other such sets of materials, however, this spread made it difficult for the reader to: i) identify relevant information required under data protection law; and ii) to recall and structure this information to form a comprehensive image of the proposed processing of personal data and its consequences.

In relation to the above, two sub-issues are worthy of further discussion. First, in several instances, consent materials included materials which only related to specific aspects of research or processing – for example, materials which concerned only MRI data collection, despite the research in question involving the collection of a broader range of types of data. In certain cases, it was difficult to distinguish precisely which conditions were relevant to different kinds of collection and processing – i.e. forms gave the impression that personal data collected in different ways would be handled in different ways but were not clear as to what this would imply. In such cases, the range of sources of information, and the lack of explicit differentiation of applicable conditions, made it difficult for the reader to keep track of information. In no case did we encounter a summary of differentiated conditions – i.e. a guide clearly explaining the differences in forms of data and the conditions under which they would be processed.

Second – and on occasion connected to the first issue – in certain cases it appeared that information provided across materials was contradictory.[22] In some cases it seemed likely that the provision of contradictory information was caused by the simultaneous use of multiple different templates for the provision of information to subjects. For example, we encountered cases in which materials of different pedigree seemed to be used in parallel, without apparently being adapted to the specifics of the study they were being used in, or to each other – for example a consent process in which unadapted generic consent materials were provided alongside, but without necessarily substantively corresponding with, project specific materials.

The previous sections provided a discussion of the issues we encountered when reading and coding consent materials. Whilst we have hitherto been critical of the consent procedures we evaluated, we would also highlight that, from a more holistic perspective, we did not have

[22] In certain cases, it is possible that the perception of contradiction may be a product of our flawed understanding of the relationship between forms of information, or that such issues would not arise in the presentation of information in context.

the impression that researchers were deliberately trying to avoid fulfilling the legal obligations in question. Indeed, in many cases, it was clear that researchers had gone to great lengths to provide subjects with information. In this regard, we rather had the impression that the predominant issue was simply a lack of knowledge of the GDPR. There are certain materials available – for example consent templates – aimed at bridging this knowledge gap. These come in different forms, including materials designed for use in specific research institutions, as well as more general materials designed by, for example, psychological societies. Currently available materials, however, display limitations. These limitations appear in terms of both availability and quality – although we should highlight that there are some excellent consent templates available, for example that of the German Psychological Society (Deutsche Gesellschaft für Psychologie, 2021).[23] Accordingly, to address the issues encountered, we feel a productive way forward would be the provision of general practical guidance concerning the content

[23] In terms of availability, materials do not seem to be available for all use cases. Institutional materials may only available be available for use within specific institutions. Whilst more general materials – for example those designed by psychological societies – may be designed for broader use, these do not seem to be available in all jurisdictions – we are not aware, for example, of general GDPR consent materials available in the UK. Even where available, general materials may display subsequent limitations in terms of accessibility and utility. These subsequent limitations take the form of linguistic limitations. For example, the German Psychological Society's GDPR consent template seems only available in German. These subsequent limitations also take the form of jurisdictional limitations. For example, the German Psychological Society's template appears to reflect certain German understandings of European data protection law which are not necessarily shared in all other jurisdictions. For example, the German Psychological Society make the following statement concerning the legitimate basis for processing: 'Welche rechtliche Basis erlaubt die Datenerhebung? Meist ist dies die informierte Einwilligung der Teilnehmenden (Aufklärung der Teilnehmer/-innen und Einwilligungserklärung)'. Compare that statement with the statement of the British Psychological Society concerning psychological research and the GDPR: 'Consequently, using 'consent' as the legal basis for processing is unlikely to be appropriate for research due to the strict demands of GDPR compliant consent. Other legal bases for processing (such as public interest or legitimate interest) are not subject to such stringent requirements. Nevertheless, gaining research consent is obviously an integral part of the research process and obtaining such consent should be included in any research proposal' (British Psychological Society, 2018). In terms of quality, the materials vary widely. Whilst certain materials are excellent, and seek to cover all information provision requirements outlined in the GDPR, other materials are unfortunately less impressive. Equally, even where materials have sought to address the information provision conditions elaborated in the GDPR, materials still do not always specifically address, or provide specific guidance in relation to, the issues encountered in our analysis. This is perhaps unsurprising, as, to our knowledge, ours is the first effort at such an analysis.

of information to be provided to research subjects as mandated by the GDPR, aimed at helping psychological researchers in designing consent procedures.[24] In light of this observation, we attempted to put such guidance together – which has now been published and is available to download open access (Hallinan et. al., 2023). We now move to briefly describe this guidance.

8. Practical Guidance for Information Provision under the GDPR

In this regard, in the following, we briefly discuss three aspects of the guidance: i) limitations to the guidance; ii) considerations to be taken into account when using the guidance; and ii) the content of the guidance.

To start, a discussion of three limitations is in order. First, our guidance only seeks to address the information provision requirements outlined in the GDPR. Accordingly, the guidance does not constitute an approach which automatically serves to fulfil all information provision requirements in consent in psychological research in Europe. Second, the guidance builds around the concrete information provision requirements in Article 13 of the GDPR and associated authoritative guidance. These should not be regarded as providing an exhaustive list of forms of information which may need to be communicated in consent materials. For example, in certain cases, other forms of information may need to be given to research subjects to allow them to effectively understand the research processing proposed and allow them to make an informed choice as to whether they wish to participate. In some cases, provision of such information may be legally required – for example under general transparency conditions as outlined in Article 5(1)(a) – or institutionally required. Accordingly, the guidance should never be taken as a substitute for context specific deliberation as to what research subjects may need to know to be 'informed'. Finally, as our guidance is general guidance based on our interpretations of the law: i) issues may be addressed and discussed which are not relevant in a specific context; and ii) issues may not be discussed which are relevant in a specific context – for example, our guidance does not deal with issues concerning the processing of personal data concerning children.

[24] Whilst we propose and discuss this option in this article, we nevertheless recognise there are other approaches which may also help in remedying the issue, for example the integration of further support for researchers in the construction of research projects – such as, for instance, via data stewardship approaches in relation to Open Science.

In turn, we would highlight that – as it focuses on clarifying the content of information to be provided to research subjects – the guidance does not address issues which are not directly connected with the content of information to be provided. The guidance does not, for example, address issues of structuring of information provision. In this regard, we would observe that preparatory steps are necessary before effectively using the guidance. We would highlight the following two steps as significant. First, researchers should be sure to clarify whether, and if so when and how, data protection law applies in relation to a study – naturally, only when data protection law applies in relation to a study, or part of a study, are the requirements of data protection law relevant. Whilst this may seem obvious, the papers and consent materials we evaluated showed significant confusion regarding key terms defining the applicability of data protection law – in particular the terms personal data and anonymity, as discussed in section 9. Whilst this is not the place to go into detail, we would again highlight that definitions of applicability concepts are available in the GDPR.[25] We would further highlight that applicability concepts are often given a broad interpretation by relevant authorities.[26] Accordingly, when researchers are in doubt as to whether data protection law applies, we suggest that the safe course of action will be to consult relevant authorities before proceeding. Second, researchers should consider how the information required under data protection law should be presented to research subjects such that this information is easily accessible and comprehensible – for example, such that the structuring issues identified in section 10 do not emerge.[27]

[25] Consider, for example, the definition of personal data as provided in Article 4(1) of the GDPR: "personal data' means any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person'.

[26] Consider, for example, the definition of anonymisation – i.e. the process of the production of anonymous data from personal data – as provided by the Article 29 Working Party: 'The underlying rationale is that the outcome of anonymisation as a technique applied to personal data should be, in the current state of technology, as permanent as erasure, i.e. making it impossible to process personal data' (Article 29 Working Party, 2014).

[27] From the consent materials we evaluated, certain approaches which seem useful in addressing such issues might be highlighted: i) researchers should place all information relevant to fulfilling obligations under data protection law in one, clearly identifiable, sub-section of consent materials; ii) researchers should make sure that, if different data protection conditionalities apply in relation to different types of data collected, or in relation to different aspects of a research project, they consider

Finally, in terms of content, our practical guidance is structured in line with Article 13 of the GDPR and relevant authoritative guidance elaborating the requirements of Article 13. In this regard, we identified ten distinct forms of information which should be provided to research subjects and use these forms of information as a top-level structure for the guidance. Each of these ten types of information is then subdivided into distinct sub-categories of information to be provided. In relation to each sub-category, the guidance then provides a description of how psychological researchers should practically understand the requirements of the law in terms of the information to be provided to research subjects. In these descriptions, we focus on providing psychological researchers with the general information they would need to understand and operationalise the requirements of the law in relation to their individual contexts. In this regard, specific attention is paid to issues we felt – from our empirical work discussed in this article, as well as in discussions with psychological researchers – require clarification.

9. Conclusion

This paper considered the following question: To what degree do consent processes in psychological research in Europe fulfil the requirements specifying the forms of information which must be provided to research subjects under the GDPR – in particular in Article 13 and in associated authoritative guidance?

The research approach involved an empirical data collection and analysis process. This process included the collection of published scientific papers and their associated informed consent materials, a close reading of papers and consent materials, and an extensive coding of papers and consent materials using a set of values distilled from the relevant conditions concerning the types of information which ought to be provided to research subjects in psychological research consent procedures under the GDPR – in particular as elaborated in Article 13 and associated authoritative guidance.

This approach allowed us to consider whether the information provided in psychological research consent procedures corresponds with the information provision requirements as outlined in the GDPR. The

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how to effectively communicate the varying conditionalities; iii) researchers should make sure they do not use conflicting terminology across consent materials, and that, in case of potential conflict, definitions provided in law are adopted; and iv) researchers should be aware that active provision of relevant types of information is required by law – i.e. mere general indications that 'data protection conditions apply' or similar, is not adequate (see e.g.: Article 29 Working Party, 2018).

approach also allowed us to consider the form in which deviations from the conditions elaborated under the GDPR occur.

The results did not paint the evaluated consent procedures in a positive light. Even a brief glance across the results of the coding process shows significant misalignments between the information provided in consent materials and the information provision requirements under the GDPR. In turn, three forms of more specific issue were identified. First, there was the problem of the provision of inadequate information. This problem manifested: i) in the form of the provision of false or misleading information; and ii) in the form of a lack of provision of adequate information.

Second, there was the problem of terminological misalignment. This problem manifested in the form of contradictory or confusing use of terminology appearing in the GDPR. The problem was particularly evident in relation to the use of terminology concerning identifiability – concerning terms relating to personal data, pseudonymous data and anonymous data.

Third, there was the problem of the structure of consent materials. This problem manifested: i) in the provision of information across multiple forms or in forms of significant length – making the identification and compilation of accurate information difficult; and ii) in the provision of information in forms of different pedigree and approach.

Despite the identified issues, it seemed to us that problems arose predominantly as a result of researchers' lack of familiarity with European data protection law under the GDPR. Accordingly, to address the issues, we consider a fruitful way forward to be the provision of general practical guidance – aimed at helping psychological researchers to understand and operationalise their obligations regarding the forms of information to be provided to research subjects under the GDPR in the design of consent procedures.

Accordingly, we put together such practical guidance (Hallinan et. al., 2023). The guidance is built directly around requirements concerning the types of information to be given to research subjects in psychological research consent according to the GDPR – as elaborated in Article 13 and associated authoritative guidance.

We do not assume the guidance constitutes a perfect 'finished' product. Our aim with the guidance is more modest. We hope only that the guidance may aid in closing the understanding deficit between psychological researchers and the GDPR. In this regard, we very much hope that others will find our proposition useful and interesting, and will take it forward.

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