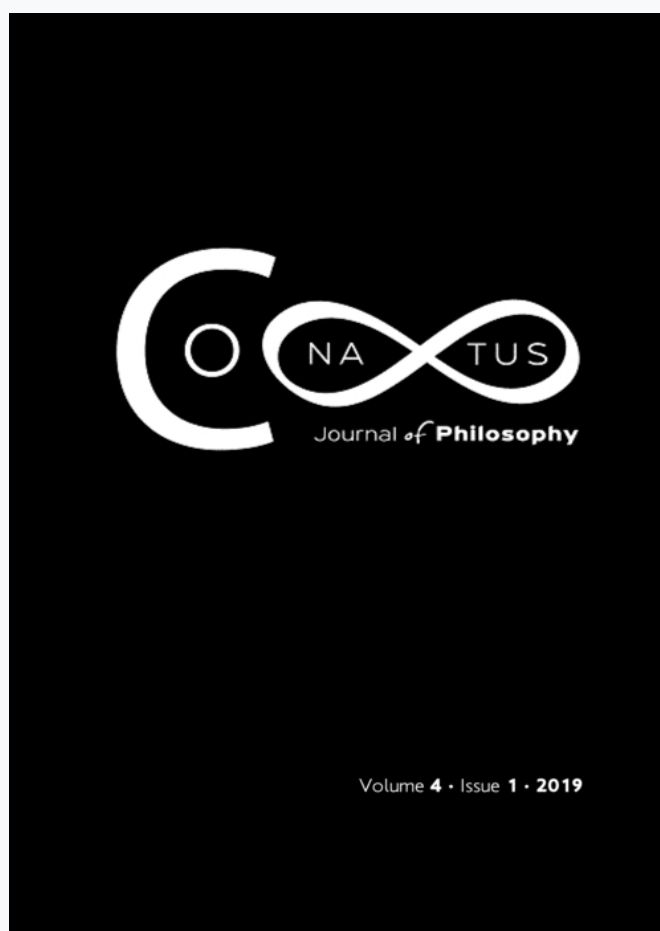


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# The Analytic Model of Consent and the Square of Opposition

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## Abstract

*Modeling consent is a process prior to any discussion about it, be it theoretical or practical. Here, after examining consent, I shall attempt to present a “logical generator” that produces all different cases of consent (and/or of non-consent), so that afterwards we may articulate a two-dimensional model which will enable us to coherently demonstrate all possible types of consent. The resulting model will be combined with Aristotle’s square of opposition, offering us even greater insight. I shall claim that full(y) informed consent is an archetype, not realized in most cases; it is just one case out of hundreds more. I shall conclude with an educational model for consent, the principle of specificity, arguing that if we wish to both understand consent and become more adept in exercising it, we need a targeted educational system – not just “better education” in general.*

**Key-words:** *consent; epistemology; square of opposition; special-needs education; sociology of science*

Consent is one of the most important tools of Bioethics – or Applied Ethics in general. It is tightly connected with notions and ideas such as *rights, autonomy* and *respect*. It is not surprising how much philosophers have delved into the matter trying to identify its conditions, its limits and its applicability.

In a sort of Wittgensteinian way, if philosophy is about making terms used in other fields *clearer*, then, it is quite arguable that this has not happened in the case of consent. The relevant terminology remains somewhat obscure and vague – especially if we deviate from the “popular” terms of “informed consent,” or even “implied-,” “hypothetical-,” and “proxy-” consent. Exactly this task is undertaken in this paper. The tools used are logical analysis and synthesis, as well as Aristotle’s *square of opposition*. Our approach here, also shows why and how a different and more targeted educational model is needed.

## I. Archetypical consent...

... or consent in theory. In this section, I shall attempt to present the parameters of the ideal type of “full(y) informed consent” (fully informed full consent), its logical analysis, that is, the intersection of basic epistemology and ethics, and also to (re)define the notion of consent within this epistemological context.

Why would anyone mix ethics and epistemology in the first place? Well, epistemology is all about knowledge. In specific, “epistemology” (in Greek: *επιστημολογία*) is a compound, formed from the words *epistēmē* and *logos*. The first term, *επιστήμη*, refers to what is falsely known to the west as “science” – when it is its exact opposite; the second term, *λόγος*, is one of the most versatile words in Greek language, meaning anything from speech and reason to logic.<sup>1</sup> Whereas *epistēmē* is related to science (even if this relationship is more of an *antithesis*), a more relevant term would be *gnoseology*, *γνωσεολογία*, since in this compound, *gnosis* (*γνώσις*) may accurately be translated as *knowledge*. However, in the English language, *gnosis* has theological connotations; its historical usage is related to *Gnosticism*.

So, how is epistemology meant here? Whereas epistemology, as *gnoseology*, is closely related to the very foundations of ethics – i.e.: where do we fish our ethical rules from? or is it merely our psychological condition that dictates our ethical canons? (cf. *psychologism*), I am addressing its original meaning. Epistemology is the study of *epistēmē* and, as such, it may primarily be reduced to mathematics; *mathēmata philosophias* (*μαθήματα φιλοσοφίας* – philosophy lessons). As such, epistemology will help us create a logical analysis of consent.

Whereas the very idea of consent has been a very popular subject in ethical philosophy, some of its major logical counterparts, i.e. uninformed consent and unintentional consent, have not been so thoroughly studied. Here, I shall attempt to approach both positive and negative versions of consent in a unified way – the task is all too easy, since logic does not allow us to make any affirmative deductive inferences based on negative premises; in such mixed circumstances, it only accepts *reductio ad absurdum*, that is, examining its affirmative conjugate by simply asking the question: “unintentional consent... what if it were intentional?” Thus, we shall have to examine consent first, in order to proceed to its other versions.

The very first step we would be obliged to follow is to define consent. Literature is somewhat problematic in that respect. For instance, whereas

<sup>1</sup> Konstantinos G. Papageorgiou, and Dimitris Lekkas, “Επιστήμη Και (vs) Scientia,” in *Φιλοσοφία, Φυσικές Επιστήμες, Βιοηθική*, ed. K. Kalahanis, accessed May 25, 2019, <http://deeaef.gr/wp-content/uploads/2016/04/Papageorgiou-Lekkas-full-text.pdf>.

Unesco's "Informed Consent" guide does inform us about what being informed *implies*, it says nothing about consent itself – apart from a vague statement that "No consent will be valid which does not depend on willingness."<sup>2</sup> Elsewhere, we read that: "Psychologically, consent can *designate* 'a state of mind of acquiescence,' and 'an act of will – a subjective mental state [...].'"<sup>3</sup> Alternatively, if we looked up the term in a dictionary, we would see that consent is defined as "compliance in or approval of what is done or proposed by another: *acquiescence*."<sup>4</sup> What is proposed here is that "consent is the deliberate act of acceptance of an external situation or an action directed towards the individual."<sup>5</sup> Informed consent – and any other kind thereof – is defined accordingly, based on the aforementioned basic affirmative definition. One problem of this definition seems to be that it takes for granted that one can easily discriminate between self-regarding and other-regarding acts – a problem Jovan Babić has discussed in more detail.<sup>6</sup> Again, the definition does not presuppose that it is 100% or easily applicable; it is we who should decide its scope.

Another problem could be its requirement for *deliberance*. But what about the absolutely negative lexical terms implying lack of deliberance? What about unintentional consent, uninformed consent, not unintentional consent, tacit consent, hypothetical consent and so on and so forth? Those can only be defined as the absence of their affirmative counterparts, e.g. "unintentional consent" being the "absence of intention or of intentionality" in the consent; the affirmative opposite, as in "intentional consent," is the only thing that has already been effectively well-defined. Hypothetical consent – or other similar kinds thereof – is not consent *per se*; this is why they have different names. However, they are closely connected with the idea of consent (as defined here), and it is up to us to decide when and how they are acceptable. By all means, as we shall discuss again and again, consent – or, to make matters worse, full(y) informed consent – is not, and cannot be,

<sup>2</sup> Amnon Carmi, *Informed Consent*, ed. Amnon Carmi (Haifa: Israel National Commission for Unesco, 2003), 6; cf. Oviedo, 1997.

<sup>3</sup> Italics not in the original; Nir Eyal, "Informed Consent," *The Stanford Encyclopedia of Philosophy*, ed. Edward N. Zalta, 2011. Cf. Eyal's citations: Peter Westen, *The Logic of Consent: The Diversity and Deceptiveness of Consent as a Defense to Criminal Conduct* (Aldershot: Ashgate, 2003), 5; Heidi M. Hurd, "The Moral Magic of Consent," *Legal Theory* 2 (1996): 121.

<sup>4</sup> "Consent," Merriam-Webster, <http://www.merriam-webster.com/dictionary/consent>.

<sup>5</sup> Konstantinos G. Papageorgiou, *Ηθική και Επιστημολογία: Το Αναλυτικό Μοντέλο Συναίνεσης στην Εφαρμοσμένη Φιλοσοφία: Τρόφιμα, Εκπαίδευση, Πολιτισμός, Βιοπληροφορική* (Αθήνα: Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών, 2017).

<sup>6</sup> Jovan Babić, "Self-Regarding / Other-Regarding Acts: Some Remarks," *Prolegomena* 5, no. 2 (2006): 193-207.

the sole criterion towards qualifying an external act as permissible: it is just one, quite improbable, case among hundreds.

Lexically negative (in Greek: *apophatic*) types of consent, therefore, can only be defined via their affirmative counterpart. This logical inversion qualifies as a kind of *reductio ad absurdum*, where we are sort of asking the question “Unintentional consent? Hmmm, let us see; what if it were intentional?” as the only means of studying it. Is that the only approach one can take?

There are additional tools one may utilize as an aid in the study of consent. Logical analysis creates a network – an ecosystem – in which inter-relations between terms clarify the meanings of them *all*, both well-defined and un- or ill-defined ones. This is a pure (or hardcore / mainstream) epistemological approach, treating terms as *void symbols* trying to explore all and every possible combination. Multi-poles are thus created. Only afterwards, i.e. after such multi-poles have been constructed, should we begin the process of *interpretation*, i.e. the process of affording void abstract terminology and symbols (words or phrases in our case) *with meanings*. Let us examine one such case by creating the minimum *quadri-pole* of “informed consent.”

1. Informed consent.
2. Not informed consent.
3. Informed non-consent.
4. Not informed non-consent.

This might seem trivial; however, its consequences are far-reaching. For one, it is quite a realization itself to understand that in every case of contrariety, or simple opposition, or contrast, or juxtaposition (in Greek: *antithesis*, *antiparathesis*) as opposed to cases of contradiction (in Greek: *antiphrasis*), the minimum cases are not two, but *at least four* – the *minimum logical quadric-pole*. Another implication is that, if “informed consent” is shorthand for informed, voluntary, and decisionally-capacitated consent, then, as soon as we try out some variations of “informed” and “consent,” it will become immediately apparent how powerful a tool we have acquired:

5. Voluntary consent.
6. Not voluntary consent.
7. Voluntary non-consent.
8. Not voluntary non-consent.

Many more poles are produced when we use extra predicates in more specific contexts:

9. Informed voluntary consent.
10. Not informed voluntary consent.
11. Informed not voluntary consent.
12. Informed voluntary non-consent.
13. Not informed not voluntary consent.
14. Not informed voluntary non-consent.
15. Informed not voluntary non-consent.

The same applies to negative forms of consent...

16. Uninformed consent.
17. Not uninformed consent.
18. Uninformed non-consent.
19. Not uninformed non-consent.

But also...

20. Disinformed consent.
21. Not disinformed consent.
22. Disinformed non-consent.
23. Not disinformed non-consent (instead of disinformed one may as well try misinformed, not necessarily informed etc.).
24. Refusal of informed consent.
25. Not refusal of informed consent.
26. Informed refusal of consent.
27. Informed not refusal of consent.
28. Not informed refusal of consent.
29. Refusal of informed non-consent.

Or...

30. Informed participation.
31. Not informed participation.
32. Informed non-participation.
33. Not informed non-participation.

... and so on and so forth, creating lists, or cladistic trees, or even mental maps of hundreds of cases that will be more or less inter-connected. Afterwards, we may want to attribute meaning to all those terms – or at least to the ones that matter the most, or to the ones that actually make sense to us (some may not seem interpretable – at least for our current state of

mind or knowledge). I have already pointed out in what way it is important for philosophers to be able to discriminate among these *subtle colourings of consent*, be it for legal or other use, or simply because it is what we do in our line of work.<sup>7</sup> One could indeed be baffled by what No. 29 means (refusal of informed non-consent) in the real world. However, one might just need to know what No. 3 means (informed non-consent): it might refer to cases where someone is informed, but does not consent. No. 29 is the refusal of that. Who refuses it? Is it the (not) consenting agent or the other side? It depends on the interpretation. There is no one-to-one correspondence. As much as one is able to construct all possible combinations (and they would count in the thousands), interpreting each term is a whole different process, with one-to-many correspondences, depending, for instance, on the selected point of reference, experiences, expectations etc. What is certain, as we have seen in this example by connecting cases 3 and 29, is that, as we explore this eco-system of consent, terms will keep becoming more and more transparent. And, in addition to all this, let us in no way walk past clear or debatable or debated legal sides of interpretation, issues, views, different for different societies, periods, attorneys and judges and courts of law, and their sometimes compulsory nature...

One thing has become pretty clear until now: the so-called “full(y) informed consent” is just one case in thousands. It may be more realistic – or fruitful – to view it as an archetype: as a perfect and ideal condition, which we *usually* hope to achieve through various processes. The reason I used the adverb “usually” is because there are cases where such an ideal type of consent is not... *all that* ideal. For example, both the *reasonable person standard* and the *individual standard* pose limits as to the quality and the quantity of knowledge that a non-expert person needs in order to make a sound choice; too much information here is considered “too much of a good thing;” sometimes, full(y) informed consent, simply put, does not work.<sup>8</sup> Moreover, it seems that the autonomy-surplus afforded to us by full(y) informed consent may turn against us in the ever-going battle between *autonomy* and *utility*. Consider, for example, embarrassing mistakes, or social pressure to make certain choices:<sup>9</sup> less autonomy, less worries!

However, our worry here is to make clear what an archetypical full(y) informed consent consists of. Such an endeavour is *not* directly affected by

<sup>7</sup> Konstantinos G. Papageorgiou, “The Subtle Colourings of (Informed) Consent in Performance Enhancement: Implications for Expertise,” *Philosophy Study* 7, no. 4 (2017): 197-203.

<sup>8</sup> Tom L. Beauchamp, and James F. Childress, *Principles of Biomedical Ethics*, 6<sup>th</sup> ed. (Oxford: Oxford University Press, 2008).

<sup>9</sup> Gerald Dworkin, *The Theory and Practice of Autonomy* (Cambridge: Cambridge University Press, 1988).

the existence of exceptions – or just other cases. It would be irrational if we expected such a condition to always apply, as long as there are so many cases where it is obviously out of the question (unconscious patients, babies, Alzheimer’s patients etc.). The archetype is merely a *reference point* that may never be realized – and for good reason. But if it were to become a reality, or if we simply wanted to grasp its theoretical meaning, we should turn our gaze towards the most important and relevant process, which is none other than education. Therefore, the educational parameter of consent is going to attract our locus of focus, but only later, after we further examine the ramifications of our approach.

## II. The Constituents of consent / Modeling consent

As our examination of consent progresses, it would seem invaluable to present a universal model of consent. Such a model would account for all types of consent, as well as expose their inter-relations. It would be based on what we shall identify as the two basic components of consent, i.e. *intentionality* and *directionality*. Autonomy, that would strike as the third candidate, is more of a prerequisite rather than a dimension of consent. Afterwards, a further logical analysis of the model will allow us to relate it with Aristotle’s iconic *square of opposition* from his *Περὶ Ἑρμηνείας* (*De interpretatione*).

So, consent is defined as the deliberate act of acceptance of an external situation or an action directed towards the individual. What stands out in this definition is the requisite of *deliberance*. Indeed, that is a very important notion and a core constituent of major traditions, such as *Theosophy*.<sup>10</sup> Under such interpretations, we are deterministic machines not capable of deliberate acts, and only after years of extensive efforts do we acquire, if only gradually, the capacity to *act* deliberately (vs. to merely *react*). Such interpretations show us that notions such as “full(y) informed” consent are true archetypes, i.e. ideal situations that may never materialize (as is the case with an-archetypical triangle: no *real* triangle has – or will ever have – e.g. sides with zero thickness, unlike the ideal triangle).

It is quite easy to identify why intentionality is a major component of consent. Intentionality is a capacity for conscious actions, and consent should – by default – be conscious, *if* it is to be named “consent” in the first place. On the other hand, such an intention is coloured by its direction.<sup>11</sup> For example, it is said (and for this example it is not

<sup>10</sup> P. D. Ouspensky, *The Fourth Way* (New York: Alfred A. Knopf, 1957).

<sup>11</sup> Cf. consciousness as object-directedness, Kristjan Laasik, “Consciousness and Intentionality: The Face of the Phenomena,” *Prolegomena* 15, no. 1 (2016): 5-19.



imperative to know if it is true) that humans develop sexual drive (*libido*) even as infants. However, until one develops a representation for what one would like to do with one's sexual drive, it remains just a vague feeling; only later will it have any real – or, for that matter, practical – significance, when the person will be able to channel this primordial energy towards specific acts, that one has meanwhile “learned” to be an effective way to express one's sexuality. The creation, therefore, of specific representations is conditional for “using” that sort of capacity. The more accurate the representation, the more directed would the utilization of the said capacity be, or of the capacity of consent. In saying that, then, we do recognize an important informational (and thus educational?) parameter in *direction*: the more information I gather, be it sensory, or verbal, the more I increase my capacity to assess the situation at hand and to direct my intentional will, e.g. in order to “choose wisely.”

To this end, before one even attempts to sketch what such an educational system would look like, one should develop a viable system: one that represents the vast amount of possible cases that revolve around consent. At least in part, this multi-faceted nature of consent is acknowledged by several contemporary writers, who e.g. discriminate between “thin informed consent” and “fuller informed consent,” but also between “hypothetical consent” and “implied consent,” and so on.<sup>12</sup> Such a model is presented in figure 1.

If intentionality and directionality are treated as the two axes of an orthogonal coordinate system, then all the cases may nicely fit in the resulting figure. Here, we have attempted i. to express consent in terms of these two dimensions, and ii. to show how we think that a selection of eight basic variations of consent should be represented. Two additional cases have been added in the form of vectors (“misinformed consent” and “participation”), as an example of how still other cases would fit into this model. Where the two axes intercept is taken to be the neutral case of “not informed non-consent.” By no means is this the only possible arrangement – different patterns are possible. What is attempted here is merely to show in what way such a model would successfully represent all kinds of consent; arguably then, one could construct a similar figure containing tens or even hundreds of cases of consent placed wherever on the coordinate system it seems fit.

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<sup>12</sup> Beauchamp and Childress, *Principles of Biomedical Ethics*; Eyal, “Informed Consent.”

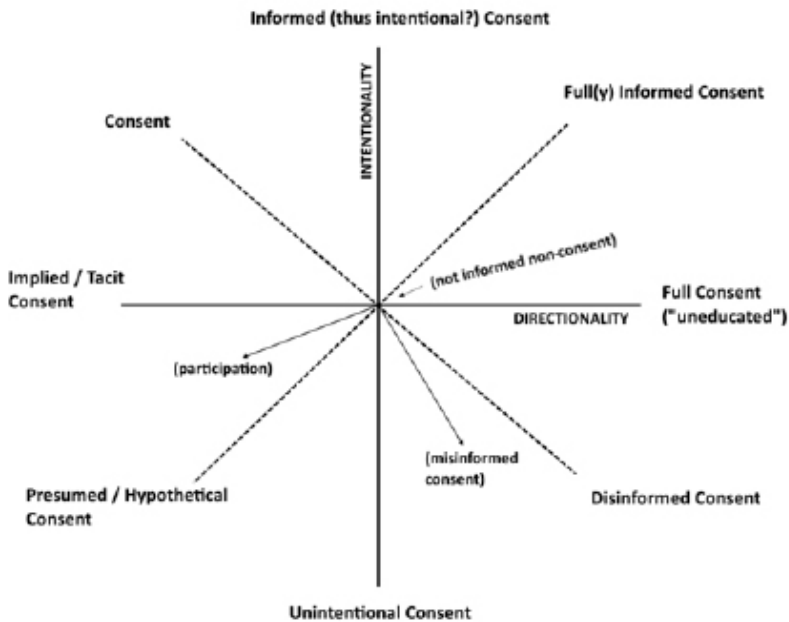


Figure 1. The two-dimensional model of consent

Many assumptions have been made in order to come up with this visual representation of consent. The most significant one is the exact order of the various cases of figure 1. I shall attempt to explain the rationale followed here. “Full(y) informed consent” is the resultant vector of maximized intentionality (IN) and directionality (DI). On the other extreme, when IN and DI are minimum, the result is “hypothetical consent” – the case of consent where we merely hypothesize that the individual would consent were he capable of reacting at all (e.g. unconscious patients). “Consent” is thought of as a more general category where IN is high, but DI is low, indicating a more passive mood. “Full [but, apparently, not informed] consent” is related to an excess drive for what is offered (thus, high DI), but without much informational backup. Now, in order to explain why “disinformed consent” (i.e. deliberately false information) is related to a low level of IN, we should assume that information is related to IN, at least under some interpretation, where knowledge is connected to both information availability and consciousness (*ergo* intention). Finally, “implied consent” is the most non-directed form of consent: the patient who indifferently and pathetically accepts an injection from a nurse – given that he is otherwise capable of reacting. Compare this with the case of a child that is offered a bar of chocolate. How positively would they react in the question “do you want some candies?” by giving their full, but alas, not informed (“uneducated”) consent?

Some other, less important, assumptions include the numbering of the axes, that is, there are no negative values as we progress to lower and lower values of intentionality and directionality. Point (0,0) is not the same as in analytic geometry; it is merely a reference point for the relations between different cases of consent. Additionally, the distance from the centre does not indicate intensity – however, in other models it might serve this function as well.

As one observes this figure, it becomes increasingly tempting to compare it to the Aristotelian *square of opposition*. Would that make any sense? Would it increase our understanding of the inter-relations among different types of consent? I am going to support this idea in what comes next.

Firstly, in figure 2(I), the original square of opposition is presented. In order to fit our model, presented in figure 1, the order of the four different cases of the square of opposition is transformed, *salva veritate*, to that of figure 2(II).

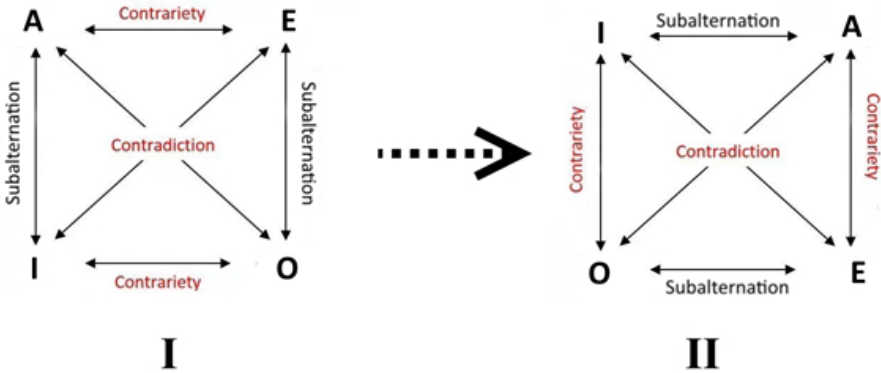


Figure 2. (I) shows the classic square of logical opposition, while (II) is the transformation (*salva veritate*) used here to fit our model presented in figure 1. Explanation of letters: A: Universal Affirmative; E: Universal Negative; I: Particular Affirmative; O: Particular Negative

Finally, based on figure 2(II), we create *our* square of opposition, as presented in figure 3; it is only just of many possible ones. What remains for us to see is whether our terms do right by the original square of opposition. Let us examine, first of all, contradicting pairs, i.e. “Consent” vs. “Disinformed Consent,” and “Full(y) Informed Consent” vs. “Hypothetical Consent.”

Indeed, it is almost trivial to ascertain that these pairs are incompatible: the existence of either prohibits the existence of the other one being (also) its denial. Contraries, i.e. “Consent” vs. “Hypothetical Consent” and “Full(y) informed Consent” vs. “Disinformed Consent” are opposite pairs as well. The question in contrariety is whether these two cases can be false simultaneously. Indeed, they can; consent, for example, may be neither full(y) informed, nor disinformed. It also seems that the two remaining pairs, i.e. “Consent” and “Full(y) Informed Consent,” as well as “Hypothetical Consent” and “Disinformed Consent,” all behave as sub-alternates – especially in the former case. A proposition is a subaltern of another if and only if it must be true if its superaltern is true, and the superaltern must be false if the subaltern is false.<sup>13</sup>

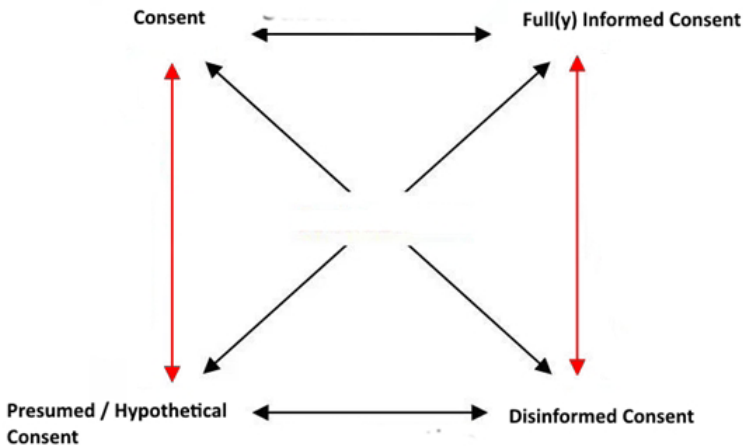


Figure 3. Square of logical opposition applied in consent – see also figure 2 (II)

All in all, we have demonstrated that a viable interpretation of the traditional square of opposition in the case of consent is possible. The reader should, however, keep track of the fact that what Aristotle had in mind when developing and laying out his logic (as expressed in his four writings nowadays known as *Organon*) was *geometry* and most of his examples were alluding there. Examples from mathematics claim the extra property of infinite accuracy *in abstracto*. Here, given the real-life concreteness of reference, levels of systemic accuracy are inevitably lost; it may not always

<sup>13</sup> Terence Parsons, “The Traditional Square of Opposition,” *The Stanford Encyclopedia of Philosophy* (Summer 2017 Edition), ed. Edward N. Zalta, 2019.

be absolutely clear, for example, when and which cases are contrarieties and not pure contradictions, and *vice versa*. However, the general idea is well implemented in our examination of consent. We hope that we have contributed another important tool in our toolbox for examining consent.

### III. Consent in practice

Indeed. All these cases of consent, that we have attempted to categorize, to modelize, and to (re)present in a universal manner, have and *should* have *actual* implications for *actual* situations. Now, it is quite usual to examine consent within the framework of Medical Ethics. Here, I shall attempt to amplify the notion of consent in two other irrelevant fields: special-needs education, and sociology of science. I shall deal with specific instances, in order to demonstrate the wider applicability of this “multi-polar” approach.

By successfully applying any model in many cases/situations/disciplines, it is possible to enhance its generalizability, as well as to demonstrate its *anti-fragility*, i.e. its capacity to adapt despite perturbations.<sup>14</sup> Here, the common denominator between these two examples is, of course, the consenting individual. In the first case, i.e. special needs education, full(y) informed consent is impossible. I shall try to identify what kind of consent is possible, to begin with, and what this kind of consent means. In the case of science, I shall argue that the public *will not* be able to provide full(y) informed consent (e.g. about how research money from their taxes is spent), if only, because the *myth* is constantly revived: science is about knowledge, and not about authority and power. I shall try to identify the implications of such a situation.

The scope of special needs education is wide. Based on my personal experience as a special needs educator for the past four years, I would say that it includes, e.g., *both* children that seem (and are) within the normal range of IQ or other measures *and* children that are not capable of performing even the simplest tasks for their own survival – let alone have communicational skills etc.<sup>15</sup> Here, I shall focus on the characteristic population of autistic individuals with concomitant intellectual developmental disorder, in particular, with level 2 and level 3 severity levels for autism spectrum

<sup>14</sup> Nassim Nicholas Taleb, *Antifragile: Things That Gain from Disorder* (New York: Random House, 2012).

<sup>15</sup> See also Victoria E. A. Brunson, et al., “Exploring the Cognitive Features in Children with Autism Spectrum Disorder, Their Co-Twins, and Typically Developing Children within a Population-Based Sample,” *Journal of Child Psychology and Psychiatry* 56, no. 8 (2014): 893-902.

disorder.<sup>16</sup> In such cases: “Severe deficits in verbal and nonverbal social communication skills cause severe impairments in functioning, very limited initiation of social interactions, and minimal response to social overtures from others.”<sup>17</sup>

Classic approaches to the problem of consent of such individuals, such as *proxy* consent or *implied* consent, rely on the premises of the *right to an open future*, *substituted judgment*, and the *best interest standard*.<sup>18</sup> However, as Graber concludes,<sup>19</sup> such premises may not sufficiently justify external interventions aiming at replacing the individual’s consent, when, as we have seen, the individual is not capable of providing consent in the first place. Have we ended up with a vicious circle?

Elsewhere, I have posed the question whether talent, or equally, autism (with or without concomitant intellectual developmental disorder), are external agents.<sup>20</sup> It is important not to identify the individual with the diagnosed condition. These external agents, however, distort the ability of the individual to consent. This leaves us with two options. We may choose to decide *directly*, based on the positive notions of *protection* and *participation*, or *indirectly*, via the various apophatic terms related to *unintentional* consent, which is *not* consent, as we have already argued. We might even consider combining these two approaches.

Deciding in terms of protecting the individual from possible harm, or in terms of increasing their participation in various activities, one must not violate the person’s consenting sphere due to the absence of past or future ability for intentionality. Granted, the person still has one of the two constituents of consent, i.e. directionality: the individual still *wants* things. But as is shown in figure 1, this only leaves room for misinformed consent, unintentional consent and all other types of consent (or non-consent) that apply – cases where intentionality is below average, i.e. below the reference point which would correspond to point (0,0), and directionality is above average, i.e. above the said threshold. By doing this, we have at least limited our options to a more localized area within our model. This area is shown in figure 4 (grey area). That is where we should look for relevant terms before we make our decisions.

<sup>16</sup> American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders: Dsm-5* (Washington: American Psychiatric Publications, 2013).

<sup>17</sup> Ibid.

<sup>18</sup> Abraham Graber, “Autism, Intellectual Disability, and a Challenge to Our Understanding of Proxy Consent,” *Medicine, Health Care and Philosophy* 20, no. 2 (2017): 229-236.

<sup>19</sup> Ibid.

<sup>20</sup> Konstantinos G. Papageorgiou, “Talent as an Unintentional Agent,” *BIO-HΘIKA* 1, no. 2 (2015): 38-54.

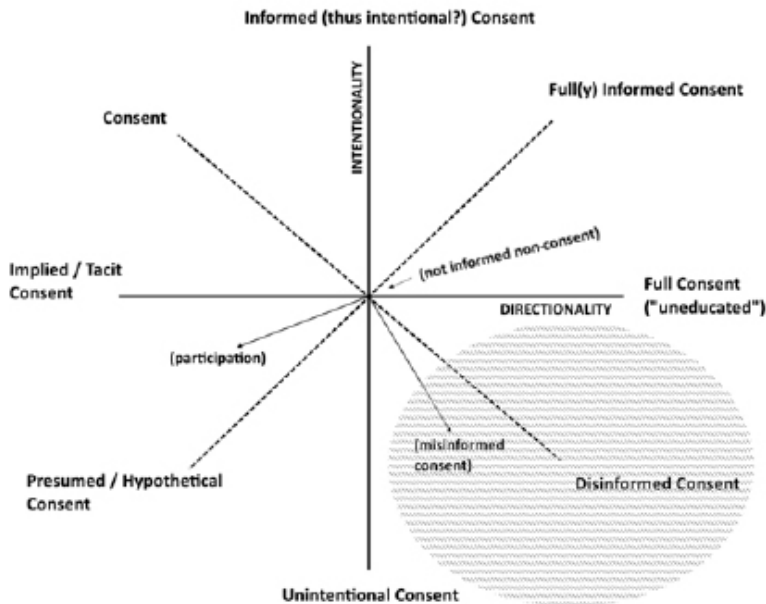


Figure 4. Types of consent expected from special needs individuals (autistic, with or without concomitant intellectual developmental disorder)

In the broader field of philosophy and (techno-) sociology of science there exists the dual discipline of STS – Studies in Technology and Science / Science Technology and Society.<sup>21</sup> Within the general public, what is taken for granted (i.e. science is about *knowledge*) is put by STS under scrutiny. Is science really about knowledge? If not, about what else? If yes, is the meaning of what we call “knowledge” (or even “research”) *fixed* and *unaltered*? Many classical readings show that the answer to these questions is not positive, but may even be negative.<sup>22</sup> Latour and Woolgar, in specific, demonstrated already from the 80’s how deceitful it may be to acknowledge scientific research as driven by *hard facts*, when personal empathies, ambitions and hearsay, all have a major impact to the final output of scientific research. Our own research has also indicated that there exists a chaotic difference between systems of knowledge that are still believed to be identical, such as science, Wissenschaft, *epistēmē* (ἐπιστήμη) etc.<sup>23</sup>

<sup>21</sup> See, for example, Harry Collins and Robert Evans, *Rethinking Expertise* (Chicago: University of Chicago Press, 2007).

<sup>22</sup> H. M. Collins, and Robert Evans, “The Third Wave of Science Studies: Studies of Expertise and Experience,” *Social Studies of Science* 32, no. 2 (2002): 235-296; Bruno Latour, and Steve Woolgar, *Laboratory Life: The Construction of Scientific Facts* (New Jersey: Princeton University Press, 1986).

<sup>23</sup> Papageorgiou and Lekkas, “Επιστήμη Και (vs) Scientia.”

But the general public trusts “science” (assuming it is a single entity), and consents to financing it with astronomical amounts of money; they eagerly send their children to study “science,” and they expect positive outcomes from “science.” Society eagerly provides plenty of resources to science – let alone that there are groups arguing that we should support scientific research even *more* generously. One could discriminate between two subsets of people who eagerly support science: individuals who are misinformed (or disinformed) about the true colours of science, and the majority of people who prefer not to get too far in the specifics of science, but, nevertheless, maintain a vague positive idea about the usefulness of science, *ergo* a kind of general duty to support it. So, I shall have to argue here that at least in the biggest part, people just provide their undriven – therefore, low in the *direction* scale –, deliberate – therefore high in the *intentionality* scale – consent to their involvement in the holy task of supporting science via e.g. taxation, or by paying tuition fees to universities. This is represented in figure 5 as the grey area in the second quartile. The grey area would include types of consent, such as: “not informed consent,” “not unintentional consent,” and “voluntary uninformed consent.”

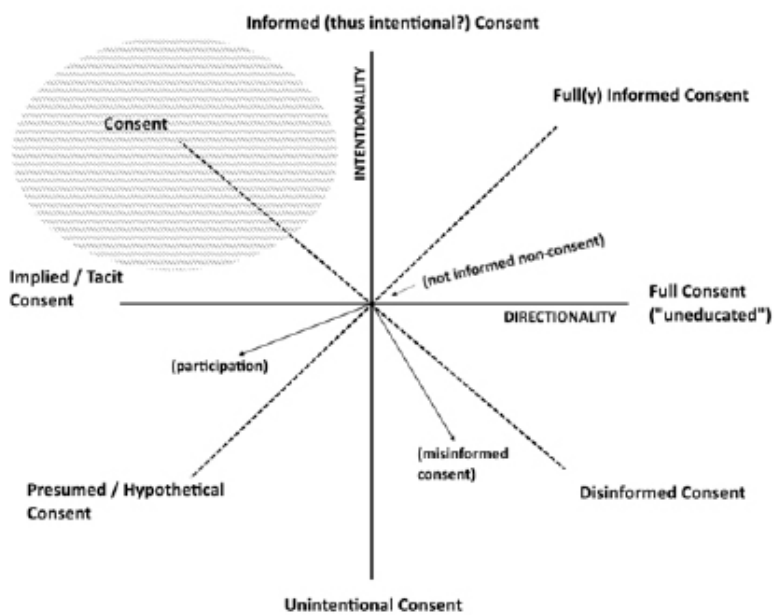


Figure 5. Types of consent expected from the general public in relation to science



Based on the outcomes of the previous section, further on I will attempt to examine “consent training,” based on this elaborate model of consent, as well as of the problems it addresses.

#### IV. Principle of Specificity

Here, I shall focus on the educational aspect of consent and its basic tenets. We have already presented a host of tools that may be used to foster the understanding of consent. In part, then, the educational aspect of consent has already been covered. However, here I am going to focus on the specificity of consent: we cannot expect people to understand consent without special training, simply because they have become more educated *in general*. What do I mean by that?

In regard to the generalizability of “mental functions,” Thorndike and Woodworth already since 1901 in a classic paper refuted the idea, popular back then, that students may readily generalize their competence from one subject to others and, for instance, learn Latin to become “generally more intelligent” (unfortunately, a still-enduring idea). As Thorndike and Woodworth concluded, “The functions of judging nearly equal magnitudes are, sometimes at least, largely separate and independent. A high degree of ability in one sometimes coexists with a low degree of ability in the others.”<sup>24</sup> The research about *specificity* continued during the decades that followed Thorndike and Woodworth’s research, most notably with Franklin Henry, who extended the findings to motor skills.<sup>25</sup> Feltovich et al. argue that “there is little transfer from high-level proficiency in one domain to proficiency in other domains – even when the domains seem, intuitively, very similar.”<sup>26</sup> This phenomenon is observed not only in the sciences,<sup>27</sup> but in sports as well, or even in variations of the same game, or in the same game and with the same rules, but played by different numbers of people, or in different environments, or at different periods of time.

We should adopt a Principle of Specificity: being just “better” educated is not going to result in a greater capacity for informed consent – contrary

<sup>24</sup> L. E. Thorndike, and S. R. Woodworth, “The Influence of Improvement in One Mental Function upon the Efficiency of Other Functions,” *Psychological Review* 8, no.3 (1901): 247-261, 260.

<sup>25</sup> Steven Bain, and Carl McGown, “Motor Learning Principles and the Superiority of Whole Training in Volleyball,” *Coaching Volleyball* 28, no. 1 (2011): 3-4.

<sup>26</sup> Paul J. Feltovich, Michael J. Prietula, and K. Anders Ericsson, “Studies of Expertise from Psychological Perspectives,” in *The Cambridge Handbook of Expertise and Expert Performance*, ed. K.A. Ericsson et al. (New York: Cambridge University Press, 2006), 47.

<sup>27</sup> Such as medicine, where the same physicians showed great variety in assessment skills depending on specific experience with different kinds of cases; Feltovich et al., 47.

to what many tend to believe. Specific and orientated training is needed from the early beginning of the educational process. Consent should be taught in a very specific manner, both theoretically and practically, starting from models such as the one presented here, and proceeding through analysing case-studies and discussing philosophical experiments. Becoming good at mathematics, at history, or, even, at philosophy in general, does not guarantee that individuals will be able to make sound choices as far as consent is concerned, in an era that puts ever-increasing demands on our everyday life: it is quite common nowadays to have to accept “Terms & Conditions” on a daily basis – or even many times during a single day – when in the past people had to go through such a process very few times in months, or even years. I would also add that individuals should also learn how to answer the following crucial questions each time:

1. What exactly do I want? (directionality).
2. How much do I need it? (intentionality).
3. What exactly is being offered to me? (sufficient information).
4. How relevant is what I want to what is being offered?
5. What are the consequences of my consent?

## V. Conclusion

The epistemological approach of consent not only does shed light on the concept of consent itself, but it also paves the ground towards becoming more consent-conscious citizens. The model presented here is a first step towards interpreting its theoretical premises in even more ways, and applying it in other practical situations as well.

We need to ask ourselves what we really need consent for, if we are merely deterministic beings. After this brief discussion, the answer would seem to be that, on one hand, there are plenty of variations to choose from and, on the other hand, that philosophical thinking may come up with plenty of ideas that are not realizable; they are archetypes. The existence of these ideal situations is another means of realization for us. The same applies to mathematics: while there are no perfect shapes in reality, their conceptual archetypes help us understand better whatever exists in our world, and provide us with theoretical objects serving as models, algorithms and trends of description and analysis – even if this only means that they provide just a better way of categorizing things.

I would expect that we ought to examine and expand our understanding of consent through a different paradigm, in parallel with the current one.

It is not an entirely new paradigm though; it is merely the application of epistemological principles to philosophical questions. It resembles analytic philosophy, but also differs from it, as it relies on broader aspects of classical epistemology, way beyond what has come to be known as *philosophical logic*.

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