

# Arriaga on Matter



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# Overview

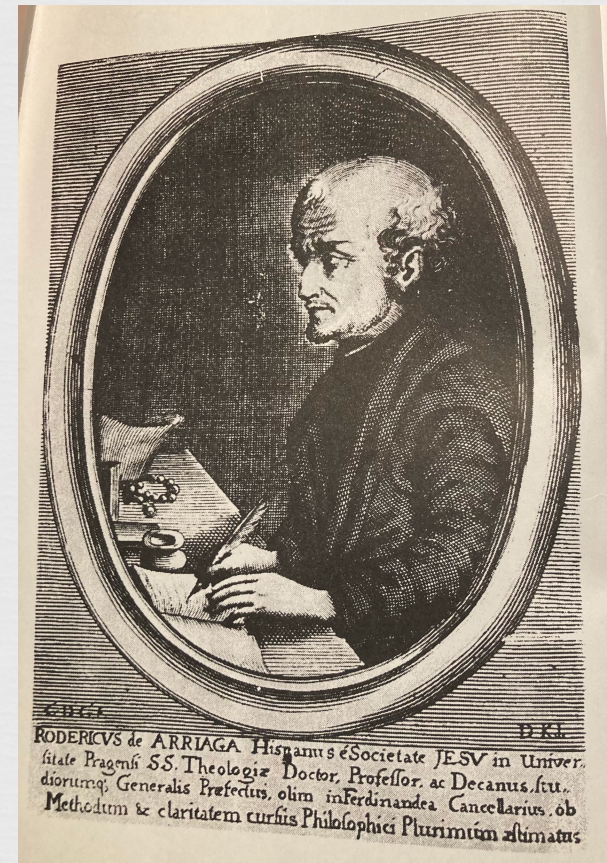


1. Rodrigo de Arriaga - A General Presentation
2. Matter as Substance
3. The Structure of Matter
4. The Union of Matter and Form
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# 1. Rodrigo de Arriaga - A General Presentation



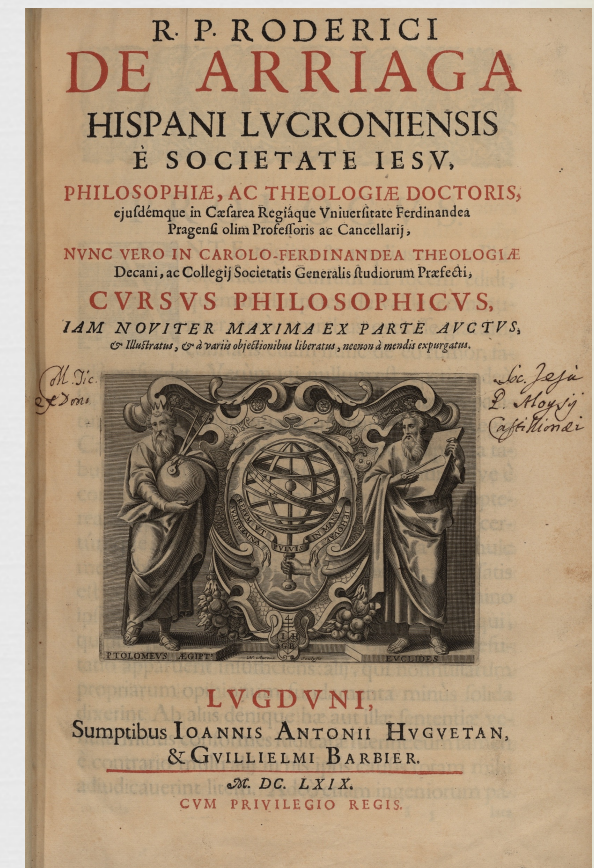
- ✧ Born in 1592 in Logroño, Castille
- ✧ Entered the Jesuits in 1606 (14 years old)
- ✧ Taught by Pedro Hurtado de Mendoza (1578-1641)
- ✧ Taught philosophy and theology in Valladolid and Salamanca 1620-1625
- ✧ Volunteered to go to Prague in 1625, to help set up Jesuit college there



# Life and Works (cont'd)



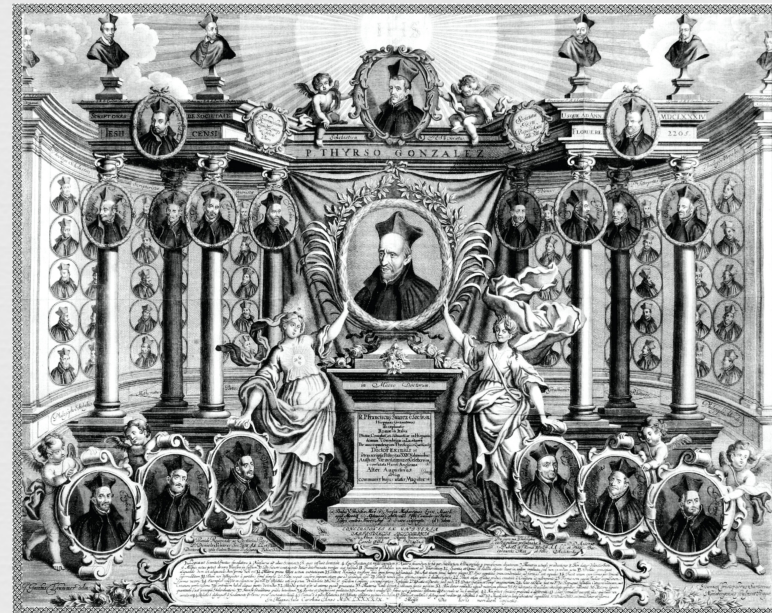
- ✧ Taught theology in Prague
- ✧ Dean of theology faculty 1637–1642 and 1654–1667
- ✧ *Cursus Philosophicus* 1632
- ✧ *Disputationes Theologicae in Summam Divi Thomae* (8 vols., 9<sup>th</sup> being composed at time of death)
- ✧ Became famous: 'Pragam videre, Arriaga audire' ("to see Prague, to hear Arriaga")
- ✧ (Must have been there for Battle of Prague, against Swedes; defence led by Jesuit professor Jiří Plachý)
- ✧ Died in Prague in 1667



# Jesuit Philosophical Tradition



✧ In a specifically *Jesuit* philosophical (and theological) tradition – main discussion partners are Hurtado de Mendoza and Suárez



# Rodrigo de Arriaga's Philosophical Project



- ✧ Project to "inform" his tradition of philosophy and theology with new results from natural philosophy
- ✧ Stresses experience over authority in philosophy ("Experientia extra controveriam nobis longe superiores sunt", *Cursus Philosophicus*, Præfatio ad Lectorem)
- ✧ Not afraid to draw "new" conclusions compared to philosophical tradition, and in view of new findings in natural philosophy

## 2. Matter as Substance: Arriaga's Substance Dualism



☞ First of all: (prime) matter is unequivocally a substance, according to Arriaga

"... primo includitur Deus et omnes substantiae simplices, quia primo et per se existunt: **includitur etiam materia prima per se existens**; includitur praeterea omnes formae substantiales, quae sunt primae radices, juxta supra dicta; item unio, ob dicta supra ..." (*Cursus*, "Metaphysica", disp. IV, sect. VI; 856b; emphasis added)

☞ But what is the right definition of a substance, according to Arriaga?

# Seven Definitions of Substance Rejected



Rejected definitions: substance as that which

1. is the essence of something.
2. "stands under" ('stare sub') (accidents, then) – excludes God, though (no accidents).
3. "stands" or exists in itself.
4. constitutes "one in itself" ('unum per se'), and where the parts are incomplete.
5. "grounds subsistence" ('fundat subsistentiam').
6. "primarily constitutes a thing" ('quae est de primo constitutive res').
7. does not depend upon another as subject.

(*Cursus*, "Metaphysica", disp. IV, sect. II-IV; 852a-856a)



# The Right Definition of Substance



- ∞ Right definition: a substance is that which constitutes a "first thing" ("Conceptus substantiae est quidquid intrinsece constituit primam rem."; *Cursus*, "Metaphysica", disp. IV, sect. VI; 856b)
  - ∞ Equivalent definitions: that which is
    1. first and in itself intended by nature, or
    2. first and in itself exists, or
    3. first root ('radix') of other.
- 'Nomine autem *prima rei* intelligo id quod primo et per se intenditur a natura; vel primo et per se existit; vel, quia est prima radix caeterorum.' (Ibid.)
- ∞ Primarily *excluded*: accidents and artifacts (although the latter are commonly ['vulgo'] called "things")

# The Right Definition of Substance (cont'd)



- ❧ On substance as "first root": rather "no further root", as God does not have accidents; hence, *disjunctive* definition, in the end
  - ❧ Primo, hinc solum a me inferri, non dari unum conceptum substantiae communem omnibus, sed substantiam definiri sub disjunctione, esse *id quod est prima radix ceterorum, vel quod ante se non habet aliam radicem priorem*. (*Cursus, "Metaphysica"*, disp. IV, sect. IV; 857b)
- ❧ Opens up for "disjunctive" definitions in different areas
  - ❧ Dixi autem, saepe non esse inconveniens definire aliquando hoc modo sub disjunctione, quando aliter non possumus. (Ibid.)
- ❧ In next sentence opens up for "purely" negative definition, though (a substance being that which "has no further root" before itself).

# The Structure of Matter



- ☞ Let us now focus on matter, then, which has "true and real entity", and whose essence is only rationally distinct from its existence (*Cursus*, "Physica", disp. IV, sect. V; 255a and 257b)
- ☞ This is standard in this tradition at this time; refers to Suárez and Hurtade de Mendoza

# The Structure of Matter



✧ Arriaga seems to reject the division between prime and proximate matter in a traditional sense, although there is still a kind of "hierarchy of powers" in matter, which he finds in comparison with the powers of the soul.

'Ergo quia nostra materia habet realiter, quod et potentia remota et proxima haberent, invenit intellectus noster fundamentum, ad distinguendas in ea duos conceptus, proxime et remote.' (*Cursus*, "Physica", disp. IV, sect. III; 251a)

✧ Also, form directly received directly in prime matter (one of "functions" of proximate matter otherwise). (*Cursus*, "Physica", disp. IV, sect. III; 249a)

# Matter, Ubication and Duration



- ☞ Now, matter can exist without substantial form. (see also *Cursus*, "Physica", disp. IV, sect. VI; 261b)
- ☞ *However*, matter *does* have to have what Arriaga calls "modal forms"; those he mentions are 'ubicatio' and 'duratio' (which I'll render "ubication" and "duration").

'Dixi *substantiali*, quia sine aliqua forma modali, nempe sine aliqua ubicatione vel duratione (casu quo distinguatur) nequit existere materia.' (*Cursus*, "Physica", disp. IV, sect. VI; 261a)

# Matter and Quantity



- ❧ So, matter needs "ubication" and "duration" (it is somewhere at some time, basically).
  - ❧ What about quantity and its traditionally related properties (extension, impenetrability)?
  - ❧ Quantity has a complex status.
  - ❧ It is "first accident" of matter (*Cursus*, "Metaphysica", disp. V, sect. I; 875a), though it is later also called a substance (!) (*Cursus*, "Metaphysica", disp. V, sect. II; 879b)
  - ❧ It is "probable" that matter cannot be without quantity, although it does not involve any contradiction to think of matter without quantity.
- '[Potest dubitari] utrum materia divinitus esse possit sine quantitate. In nostra sententia nequit, quia sunt idem; in contraria potest, quia nulla est contradictio.' (!) (*Cursus*, "Metaphysica", disp. V, sect. I; 875a)
- ❧ We'll come back to this question of matter without quantity.

# Matter, Extension and Impenetrability



☞ Quantity renders that which is naturally impenetrable actually impenetrable.

'Dicendum ergo est ultimum, primarium effectum quantitas esse, reddere impenetrabile per se naturaliter id in quo est cum alio eiusdem speciei.' (*Cursus*, "Metaphysica", disp. V, sect. I; 877b)

☞ However, from reasons of Faith, this does not *essentially* belong to quantity.

☞ God can "impede" consequences from quantity.

## Matter, Extension and Impenetrability (cont'd)



- ∞ Extension does *not* seem to be a consequence of quantity.
- ∞ Extension is nothing but having "parts outside of parts".  
'**actualis extensio solum dicit habere partes extra partes,**  
sive penetrari possint sive non, ideoque forma substantialis  
materialis separata a quantitate potest habere eam  
extensionem, etsi materia distinguaretur a quantitate, adhuc  
extensa remanere' (*Cursus*, "Metaphysica", disp. V, sect. I;  
877b; emphasis added)
- ∞ So, extension is neither dependent on impenetrability, nor  
on quantity, it seems.
  - ∞ So: still "theorizes" on matter without quantity.



## Matter, Extension and Impenetrability (cont'd)



☞ Argument for separating impenetrability from extension: Christ walking through the wall to His disciples. With the objection:

'Dices: Hi [i.e., extensio et impenetrabilitate] non sunt duo, sed unus; nam esse unam partem ipsius corporis extra aliam, est formalissime non esse duo corpora in eodem loco. Respondeo, licet non esse duo corpora in eodem loco, includat necessario extensionem, posse tamen dari extensionem corporis, etiamsi aliud sit penetratum cum illo; **ut cum Christus intravit ad discipulos, retinuit extensionem partium, attamen fuit penetratum cum muro.**' (*Cursus*, "Metaphysica", disp. V, sect. I; 878b; emphasis added)

# Matter and Quantity, again



- ☞ So, ubication and duration has to come with matter; matter is "probably" inseparable from matter, but Arriaga still theorizes about matter without quantity (he does not do so regarding matter without ubication and duration).
- ☞ First, matter can be extended, even if it lacked quantity.  
'unde sine illa [i.e., quantitate] posset materia esse extensa, si Deus det eas ubicationes distinctas, etiamsi nihil sit quod eas petat.' (*Cursus*, "Metaphysica", disp. V, sect. I; 878b)
- ☞ Once again: the connection between extension, on the one hand, and ubication, on the other.

# Matter and Quantity, again (cont'd)



☞ Second, matter without quantity could, but would not necessarily have to, be reduced to a point.

'licet materia, ablata quantitate, posset ad punctum reduci, non propterea necessario reduceretur' (*Cursus*, "Metaphysica", disp. V, sect. I; 878b)

☞ Doesn't explicate more on this.

☞ Further: could matter without quantity move? Yes! From "proper gravity" ("propria gravitate").

'se enim lapide in aëre existenti auferetur quantitas, a sua gravitate traheretur deorsum, et facilius forte quam iam, quia corpora inferiora nullo modo ei resisterent' (!) (Ibid.)

## Matter and Quantity, again (cont'd)



☞ Matter can even be moved without quantity (and hence, without impenetrability) – not corporeal agent, though.

'[N]os, ut experientia ducet, non possumus impulsus imprimere, nisi corpori resistenti, ergo tunc quando talis resistentia non esset, non posset imprimi. Ideo dixi, *ab agente corporeo extrinseco*, nam et ab Angelo, qui habet virtutem immediate producere ubi independenter ab impenetratione, optime posset moveri.' (*Cursus*, "Metaphysica", disp. V, sect. I; 879a)

☞ However, what matter *cannot* do without quantity is to take up "divisible space" ('*spatium divisibile*'). (*Cursus*, "Metaphysica", disp. V, sect. I; 879a)

☞ No space (!) to go into that here, though.

## 4. The Union of Matter and Form



- ❧ Prime matter as well substantial form are substances, and really distinct, and we've looked more closely on the former now.
- ❧ What is the nature of their union, though?
- ❧ First: *material* composites (i.e., non-humans in nature).
- ❧ Causation of form from matter different from union.
  - i. Form of horse can be produced by matter without union ('**Causalitas formae equine potest divinitas manere sine unione**, si conservetur ea forma extra subjectum ...' *Cursus*, "Physica", disp. IV, sect. III; 303b; emphasis added).
  - ii. Union between matter and form can come about without production ('Si enim forma equi divinitus crearetur, eodem modo posset uniri materiae ac nunc, esset tamen in eo casu **unio sine causalitate**.' Ibid.; 302b; emphasis added)

## The Union of Matter and Form – Material Forms (cont'd)



- ❧ Hence: causation without union, as well as union without causation, possible between matter & form.
- ❧ What, then, is the nature of union?
- ❧ Seen from different perspectives, it is either the "materialization of form" or "information of matter" ('quatenus per eam materia unitur formae, dicitur materializatio; quatenus vero eadem unio tenet se ex parte formae eam uniens materiae, dicitur informatio' *Cursus*, "Physica", disp. IV, sect. III; 308b)
  - ❧ This is but *one* union, conceived in two different ways ('qui duo conceptus non realiter (ut P. Hurtadus vult) sed ratione distinguuntur' Ibid.)
- ❧ [Many forms could unite to one and the same subject, though, by divine power (*Cursus*, "Physica", disp. III, sect. IV; 289b)]

## The Union of Matter and Form – Material Forms (cont'd)



❧ Last, on material forms: can union be created by God directly, without concurrence from form and matter?

❧ Answer: yes.

❧ Unclear, though, what to make of this answer (it still must be form and matter that are united, right? ['non potest unio sine utraque re conservari' Ibid.]).

'ergo poterit Deus se solo sine concursu materiae et formae unionem conservare, quo casu compositum vere crearetur in ratione compositi, quam supponimus creatam. Imo etiam omnes partes illius possent creari' (*Cursus*, "Physica", disp. IV, sect. III; 308b)

❧ Clear, at least, that we have **three "parts" in composite: form, matter and union**

❧ Composite nothing over and above matter + form + union (*Cursus*, "Physica", disp. IV, sect. III; 309b)

## The Union of Matter and Form – Human Soul



☞ Human soul first argument for existence of substantial forms generally, in Arriaga.

'Primo ex animo rationali, quem ultra corpus esse in homine, adeo est certum, et lumine naturale notum ex variis operationibus ipsius hominis, ut nullus, quamtumvis rusticus, eam non agnoscat: ex homine autem discurremus ad alia entia.' (*Cursus*, "Physica", disp. III, sect. I; 274a)

☞ As in Suárez! (*DM*, XV, I.6. 'Prima igitur ratio sit, nam homo constat forma substantiali ut intrinseca causa; ergo et res omnes naturales.')



## The Union of Matter and Form – Human Soul (cont'd)



☞ Differences from "material" forms:

- ☞ Human soul created directly by God, and united to matter (*Cursus*, "Physica", disp. III, sect. II; 278a).
- ☞ Human souls are simultaneously in many places, which is not the case with material forms.

'Quia eadem res nequit esse simul in pluribus locis, ergo eadem forma nequit esse naturaliter in pluribus materiis; necessario enim deberet occupare plura loca. Intellige hanc doctrinam de forma materiali: **nam spiritualis, scilicet rationalis, simul eadem est in capite, pede, etc. quae sunt partes materiae distinctae**; forma autem materialis nequit esse in pluribus locis neque inadeguate distinctis ...' (*Cursus*, "Physica", disp. III, sect. V; 280a; emphasis added)

## An Open Question on Substance: Subsistence



✧ An open question: large part devoted to subsistence (*Cursus*, "Metaphysica", disp. IV, sect. VIII–XIII; 858–875), but unclear how to relate to general question of substance.

✧ Unknown to ancients (non-Christians), according to Arriaga, and seems primarily related to questions of theology:

'Philosophos antiquos ignorasse prorsus subsistentiam de qua nos, quia huius notitia eruta est ex mysterio Trinitatis et Incarnationis; scimus enim ex hoc naturam humanam Christi caruisse propria subsistentia, ex quo evidenter infertur, dari in homine ultra naturam humanam, quae tota fuit in Christo, aliquid aliud quod sit subsistentia, quo caruit humanitas Christi, et cuius loco habuit divinam subsistentiam.' (*Cursus*, "Metaphysica", disp. IV, sect. VIII; 858b)

# 5. Scholasticism in Transition



- ❧ Arriaga clearly stands in the Scholastic philosophical tradition, although now in a clearly *Jesuit* tradition (referring to Suárez and Hurtado de Mendoza).
- ❧ Perceives challenge from new experimental methods as well as from "new" philosophy (e.g., Gomew Pereira, 1500–1567, who rejected prime matter).
- ❧ Uses conceptual tool at his disposal to answer new challenges, and does so in an intellectually flexible way.
- ❧ Stands in intellectual line leading to Boscovich's (1711–1787), also Jesuit, early version of atomic theory.
- ❧ More on this another time.

# Thank you...



... for your patience and attention!