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Sažetak

U razdoblju helenističke filozofije razlikuju se tri osnovne discipline, etika, fizika i logika (epistemologija). Epikurove osnovne teze u sve tri discipline su u helenističkoj filozofiji okarakterizirane kao izrazito kontroverzne, povlačeći za sobom brojne polemike, a vrlo često i podsmijeh. U fizici tako Epikur tvrdi da se svijet sastoji od atoma i praznine, u etici da je najviše dobro za kojim težimo ugoda, no epistemološka teza čini se najproblematičnijom. Osnovu Epikurove epistemologije čini zamisao po kojoj su *svi* opažaji istiniti. Ovom tezom bavit ću se u disertaciji.

Epikurova epistemologija, kao i epistemološka pitanja ostalih helenističkih škola, potaknuta su dvama važnim pitanjima: (i) je li znanje uopće moguće i (ii) ukoliko je moguće, na čemu počiva znanje? Epikurovi odgovori na ova pitanja baziraju se na prihvaćanju opažajnog iskustva kao temelja na kojem svo znanje počiva. Utoliko je jasno da se Epikura može svrstati na stranu empirističke tradicije znanja. No ono što razlikuje njegov empirizam od onih iz njegova vremena, ali i od kasnijeg empirizma u povijesti filozofije, jeste zamisao da se empirističko znanje može obraniti samo ukoliko se prihvati teza o nepogrešivosti opažaja, što ukazuje na radikalnost Epikurovog pothvata

Međutim, ono što je osobito iznenađujuće u njegovoj empirističkoj epistemologiji je pokušaj obrane takvog znanja koja se zasniva na atomističkoj teoriji. Epikur tu slijedi donekle Demokrita, koji također polazi od empirističke pretpostavke da je osnova znanja moguća samo na temelju opažanja, no u trenutku kada nas opažanje odvede do atomističke teorije, opažajni svijet pokazuje se nespojivim s atomističkim i stoga ga Demokrit odbacuje. Drugim riječima, svijet boja, mirisa i ostalih fenomenoloških svojstava Demokrit proglašava konvencijom, dok je prava realnost ona atomistička, lišena svih navedenih svojstava. Epikurova epistemologija je upravo pokušaj spajanja svjetova koje je Demokrit razdvojio. Dakle, Epikur želi zadržati sliku svijeta onakvom kakvom je vidimo, to jest, neku vrstu naivnog realizma i pokazati da je ta slika svijeta spojiva s atomističkom. Način na koji to ostvaruje je već spomenuta ideja o nepogrešivosti svih opažaja. Predmet ovoga rada je interpretacija osnovne Epikurove teze, gdje ću pokušati ponuditi argumente u prilog Epikurovoj tezi i njegovoj epistemološkoj teoriji.

Prije nego krenem na konkretniji prikaz onoga čime ću se baviti, potrebno je istaknuti da u radu govorim o 'epikurovskoj' filozofiji, te izvore Epikura i kasnijih epikurovaca tretiram kao jednako važne primarne izvore. Razlog za to leži u činjenici da je kasnija epikurovska

škola ostala izrazito vjerna Epikurovim originalnim tekstovima, osobito u usporedbi s drugim školama, recimo stoičkom, koja bilježi izrazite promjene doktrina u okviru pojedinih disciplina. Kod epikurovaca, s druge strane, stabilnost unutar doktrinarnog sustava bazira se na izrazitom poštovanju Epikura, kojeg se gotovo uzdizalo na nivo božanstva. Njegov autoritet stoga ostaje neupitan i stoljećima nakon njegove smrti. Za takvo nešto pobrinuo se i sam Epikur budući da je sustav prenošenja znanja organizirao na način da su se osnovni postulati i filozofski kanoni učili napamet. Primjerice, sačuvano *Pismo Herodotu* je sažetak fizikalnih i epistemoloških doktrina koje su služile upravo tome da ih studenti doslovno memoriraju. Osim toga, u svojoj oporuci Epikur je zadao smjernice ponašanja nakon njegove smrti iz kojih je vidljiva želja za održavanjem zajednice na okupu i gotovo sektaškom jedinstvu. Naime, Epikur je utvrdio datume koji su se morali obilježavati, poput njegova rođendana i rođendana članova njegove obitelji, dok su neka okupljanja utvrđena na mjesečnoj razini, poput onog posvećenog Metrodoru. (DL X.18) U tako organiziranoj zajednici, u kojoj je kult utemeljitelja bio maksimalno poštivan i slavljen, izgradio se zajednički identitet i osjećaj pripadnosti, koji nije bio prisutan kod ostalih škola tog vremena. Prihvatiti osnovne Epikurove postavke značilo je prihvatiti određeni stil života. Stoga se niti u svojim tekstovima kasniji epikurovci ne udaljavaju od originalnog Epikurovog učenja, iako ga nadopunjavaju i razvijaju sukladno raspravama aktualnim vremenu u kojem žive.

Najjasniji dokaz poštovanja prema učitelju nalazimo kod rimskog epikurovca, Lukrecija, koji epikurovskoj filozofiji posvećuje djelo *De rerum natura*. U njemu Lukrecije piše o osnovnim postulatima epikurovske filozofije na način da je predstavlja kao jedinu istinitu. U isto vrijeme kada Lukrecije piše, aktivna je i epikurovska škola koja djeluje pored Napulja i čiji je osnivač Filodem. (*De Fin*. II.119) Njegovo djelo *De signis* je jedno od najznačajnijih prikaza kasnije epikurovske filozofije o metodama provjere istinitosti vjerovanja i zaključivanju na temelju znakova. Filodemovo pisanje jasno pokazuje da se Epikura i dalje smatralo apsolutnim autoritetom, što potvrđuje i praksa nekih drugih kasnijih epikurovaca, primjerice Kolota, koji svoju filozofsku aktivnost vide u tome da na sustavan način pokažu kako su sve ostale filozofske škole u krivu. Sve ovo, dakle, daje za osnovu da govorimo o epikurovskoj epistemologiji kao zajedničkoj doktrini Epikura i njegovih kasnijih sljedbenika.

Epikurova filozofija prije svega podređena je moralnoj teoriji i zamisli da je ugoda najviše dobro kojem ljudi teže, te je stoga osnovni cilj riješiti se neugode. Jedan od uzroka neugode Epikur vidi u krivim vjerovanjima, koji u nas unose nemir i strah, a to su prije svega vjerovanje da se bogovi mogu miješati u naše živote, zatim da su nebeska tijela božanstva i da

je smrt nešto čega se trebamo plašiti. (DL. X.76-7, 124) epikurovska filozofija stoga ima za cilj ukloniti ova vjerovanja, dakle djelovati terapeutski, sa ciljem postizanja sreće (*eudaimonia*). No, takva vjerovanja moguće je ukloniti samo ukoliko spoznamo pravu sliku svijeta, a to je atomistička teorija, koja će nam onda pokazati da se bogovi ne miješaju u naš svijet, da nebeska tijela nisu božanstva, kao i to da smrt nije nešto čega se trebamo plašiti. Stoga, potrebno je dakle krenuti u fizikalno istraživanje osnovnih sastavnica svijeta i prave prirode predmeta koji nas okružuju, odnosno steći znanje o svijetu. Za Epikura je epistemologija stoga podređena moralnoj teoriji i njena funkcija je prije svega instrumentalna. No, to ne umanjuje njezin značaj, budući bez znanja o svijetu sreća nije ostvariva.

Epikur u epistemologiji polazi od toga da je potrebno odrediti sredstva na temelju kojih utvrđujemo istinitost ili lažnost vjerovanja. Drugim riječima, potrebno je odrediti standarde istinitosti. Problem standarda ili kriterija istinitosti je središnji problem helenističke epistemologije, a uvodi ga upravo Epikur. Kod Diogena nalazimo zapis da je Epikur napisao djelo *O kriteriju, ili Kanon,* gdje *'kanon'* u doslovnom značenju označava ravnalo kojim se provjeravala ravnoća dugih crta. (DL X.27) U skladu s tom metaforom, Epikura smatra da je u epistemologiji potrebno pronaći ekvivalentno oruđe kojim ćemo provjeravati istinitost. Problem kriterija kojeg potom prihvaćaju i ostale škole, prije svega stoička, tako postaje temeljni problem epistemologije, koji se odnosi na utvrđivanje temelja istinitosti. Epikur je smatrao da postoje tri kriterija: opažaji (*aistheseis*), osjećaji (*pathe*) i pretpojmovi (*prolepseis*). Opažaji i pretpojmovi su epistemološki kriteriji, dok su osjećaji kriterij za djelovanje i spadaju u područje etike, te se stoga s njima ne bavim u radu.[1]

Rad započinje pregledom razvoja i motivacije koja je dovela do otvaranja problema kriterija istinitosti u helenističkoj filozofiji. U literaturi se obično govori o 'epistemološkom obratu' koji je nastao uvođenjem ovog problema, budući da se njime fokus interesa u epistemologiji sada usmjerava prije svega na pitanje mogućnosti znanja, što implicira ozbiljniju potrebu da se odgovori skeptičkom izazovu, te stoga i potrebu da se jasno odrede polazišne točke i temelj istinitosti. U radu tvrdim da ono što potiče Epikura na bavljenje ovim problemom jeste skepticizam koji proizlazi iz demokritovske epistemologije. Naime, Demokrit otvara jaz između svijeta osjetilnog iskustva, koji se sastoji od boja i drugih kvalitativnih svojstava s jedne strane, i s druge svijeta kakav zapravo jeste, dakle, svijet atoma i praznine. Ono što je osobito problematično jeste činjenica da atomistička slika svijeta pokazuje ovu iskustvenu kao neprimjerenu i lažnu, te je stoga razumno odbaciti je što

[1] Više o pathe vidi DL X.129, 34; Cicero, *De fin* I.23.

Demokrit upravo i čini. Međutim, posljedica toga pogubna je i za sam atomizam, budući da metoda dolaska do znanja o atomima polazi od iskustva i nikako od razuma. Epikur je svjestan ovih loših, skeptičkih posljedica koje proizlaze iz Demokritove epistemologije i cilj mu je pokazati da se obje slike svijeta mogu spasiti. Drugim riječima, Epikur tvrdi da je moguće imati znanje o obje realnosti i to tako da se one međusobno ne isključuju, nego upravo suprotno – opažaji služe kao znakovi na temelju kojih je opravdano izvesti zaključak o postojanju atoma, a atomizam se onda pokazuje kao jedino moguće objašnjenje slike svijeta kakvu imamo na temelju iskustva, čime se bavim u posljednjem poglavlju. No, prvo poglavlje, dakle, postavlja problem kriterija, pojašnjava motivaciju za bavljenje problemom i uvodi nas u konkretnu raspravu kod Epikura.

U sljedeća dva poglavlja bavim se pojedinačnim kriterijima, opažajima i pretpojmovima. Opažaji su osnovni kriterij i temelj cijele epistemologije. Poglavlje o opažajima podijeljeno je na dva dijela, budući da tvrdim da Epikur brani tezu o istinitosti svih opažaja kroz dvije argumentacijske linije. U prvoj se ne referira na atomizam, nego utvrđuje opažaje kao polazišnu točku neovisno o atomističkoj teoriji. U drugom dijelu pokazujem da se onda teza da su svi opažaji istiniti opravdava i utemeljuje u atomizmu. Smatram da je važno razlikovati ova dva pravca argumenta, budući da bi u protivnom Epikurova argumentacija bila cirkularna jer bi se istinitost opažaja izvodila iz atomizma, a atomizam iz istinitosti svih opažaja. Tvrdim dakle, da Epikur polazi od argumenta da ukoliko ne prihvatimo istinitost svih opažaja, znanje je nemoguće. No budući da je činjenica da imamo znanje o svijetu bjelodana, preostaje nam prihvatiti istinitost opažaja. Teza da su neki opažaj istiniti, a neki lažni odbacuje se budući da Epikur tvrdi da ne postoji neki viši ili drugačiji kriterij na temelju kojeg bi se opažaji mogli odbaciti. Ovu skupinu argumenata, koja je neovisna o atomističkoj teoriji nazivam 'a priori' argumentima, utoliko što dolaze prije atomizma. Potom prelazim na teoriju opažanja koja je utemeljena na atomističkoj teoriji. Epikur tu uvodi teoriju sličica (*eidola*) za koje tvrdi da se stalno otpuštaju s površine predmeta, te aficiraju osjetilne organe, što onda dovodi do stvaranja opažaja. Budući da opažaji u tom procesu potpuno pasivno reagiraju na vanjski podražaj, uvijek se potpuno poklapaju sa svojim uzrokom. Također, opažaji su za Epikura iracionalni (*alogos*) što interpretiram na način da ne mogu intervenirati u sadržaj onoga što nam je dano vanjskim podražajem. Na temelju toga, tvrdim da je sadržaj opažanja nekonceptualan, dok je s druge strane sadržaj vjerovanja konceptualan. Formiranje vjerovanja je čin u kojem se sadržaj opažaja interpretira, konceptualizira, što onda otvara mogućnost da vjerovanje bude istinito ili lažno. To je osnova Epikurova objašnjenja pogreške, po kojem

pogreška uvijek leži u formiranom vjerovanju i nikada u samom opažaju. Stoga su opažaji samoočigledni i predstavljaju prvi i temeljni kriterij istinitosti.

Treće poglavlje donosi raspravu o pretpojmovima. Pretpojmovi predstavljaju zapamćene slične opažaje određenog tipa predmeta. Na taj način pretpojmovi nam omogućavaju da sistematiziramo sadržaj dan u opažaju, tj. da omoguće proces konceptualizacije tog sadržaja. To ukazuje na važnost pretpojmova budući da opažanjem ne možemo utvrditi što vidimo, nego samo da vidimo, a također nam omogućava razlikovanje uloge pretpojmova i opažaja kao kriterija. Iz toga onda proizlazi i funkcija pretpojmova kao kriterija istinitosti, budući da vjerovanje u kojem pretpojam nije upotrijebljen na ispravan način neće biti istinito. Nadalje, pretpojmovi imaju i ulogu polazišne točke u svakom istraživanju, što predstavlja Epikurovo rješenje Menonovog paradoksa. Naime, da bismo mogli istraživati bilo što, potrebno je imati pretpojam te stvari da bi uopće mogli krenuti sa istraživanjem.

Konačno, posljednje poglavlje pokazuje metodu koju su epikurovci razvili za testiranje vjerovanja. Metoda se bazira na falsificiranju ili verificiranju vjerovanja na temelju opažaja. U slučaju vidljivih predmeta, koristimo se direktnim opažanjem, kao u slučaju tornja kojeg gledamo izdaleka. Naime, čekat ćemo da se približimo tornju i onda na temelju direktnog opažanja utvrditi je li naše vjerovanje bilo istinito ili lažno. No u slučaju nevidljivih stvari, i to prirodno nevidljivih stvari ili onih do kojih se nikada ne možemo približiti da bi utvrdili njihovu pravu prirodu, ne možemo koristiti direktno testiranje opažajima. Stoga, u tim slučajevima, opažanje služi kao znak onoga što je izvan dosega opažanja, kao što su atomi ili nebeska tijela. U tom slučaju, smatra Epikur, vjerovanja koja su u skladu s opažanjima su istinita, dok ona koja nisu kompatibilna s opažanjem su neistinita. Atomizam, kao najvažnija teorija o neopažljivom, se pokazuje kao sukladna osjetilnom iskustvu, te je stoga njime i potvrđena. Nadalje, atomizam se pokazuje kao jedina teorija kojom je moguće objasniti naše iskustvo svijeta sa svim kvalitativnim svojstvima koja su evidentna u našem iskustvu. Time Epikur uvodi atomizam kao najbolje i jedino znanstveno objašnjenje iskustvene slike svijeta.

Na kraju, opća karakteristika epikurovske epistemologije jeste da je ona radikalno empiristička i da se ta slika svijeta brani na vrlo specifičan način: tezom o istinitosti svih opažaja i atomističkom teorijom. Osnovni cilj joj je pokazati kompatibilnost osjetilne i znanstvene slike svijeta, što Epikura čini bliskim i modernim raspravama o znanstvenom objašnjenju. Također, epistemologija ima primarno instrumentalnu ulogu i ne predstavlja teoriju o znanju u modernom smislu. Ono što nalazimo nije rasprava o znanju kao takvom,

kao kod Platona ili Aristotela, nego prije svega samo rudimentarnu teoriju opravdanja, sa razrađenom metodologijom testiranja vjerovanja o neopažljivome.

Summary

The focus of my thesis is Epicurean epistemology. Epicurean epistemology is based the thesis according to which *all* perceptions are true obliging himself to empiricism. However his strong epistemological empiricism is combined with and even defended through atomistic theory, according to which the knowledge of the real structure of the world goes beyond the scope of our experience. In the thesis I shall examine the way Epicurean epistemology solves this problem of incompatibility between empiricism and atomism. Epicurus solution is based on establishing the means by which knowledge can be gained, that is, the criteria of truth. Epicurus held that there are three separate criteria: perceptions, preconceptions and feelings.

In the first chapter I introduce the term 'criterion' and explore the general context in which the debate about the criterion of truth. I argue that Epicurus' main motivation lies in the kind of atomistic skepticism according to which phenomenal knowledge is impossible.

In the second chapter I explore the first criterion of truth, perceptions, and examine interpretations of the central claim that all perceptions are true. The chapter is divided in two parts since I shall argue that Epicurus offers two different lines of argument to support the thesis that all perceptions are true. The first claims that unless we accept that all perceptions as true, knowledge will be impossible. The second defense the incorrigibility of perception on the basis of atomistic theory of perception (eidolic theory).

In the third chapter I explore preconceptions, the second criterion of truth. I argue that the process of formation is purely empirical since they are produced through repeated perceptions of individual instances of a particular type of thing. Given this, preconceptions are the means by which we recognize types of object, and as such are fundamental to Epicurus' account of how we gain knowledge of things. Besides this function, I shall argue that by preconceptions we engaged in the process of interpretation of perceptual content, its conceptualization which in the end enables us to form beliefs.

In the last chapter I discuss Epicurus' methods of testing beliefs. Beliefs about observable objects are tested by direct perception through the methods of witnessing or non-witnessing. By establishing methods of counterwitnessing and non-counterwitnessing for testing beliefs about what is hidden from direct perception, Epicurus show the way in which we infer about the existence of atoms and other non-evident things on the grounds of perception.

Key words

Epicurus, Epicurean epistemology, perception, preconception, empiricism, atomism, the criterion of truth, knowledge, incorrigibility of perceptions, eidolic theory, truth, falsehood, beliefs, testing beliefs, evident things, methods for testing beliefs, non-evident things, witnessing, non-witnessing, counterwitnessing, non-counterwitnessing.

Introduction

Following the standard tripartition of philosophy in the Hellenistic period, Epicurean philosophy is divided in physics, ethics and epistemology (canonic). In all three branches the doctrines proposed by the Epicureans raised controversy and polemical reactions. In physics they embraced the atomistic theory, claiming that everything consists of atoms and void; in ethics they defend hedonism claiming that the highest good humans pursue is pleasure; and in epistemology they hold specific version of empiricism, claiming that all knowledge rests upon incorrigibility of perceptions. The principle focus of my thesis is that of Epicurean epistemology, which of the three disciplines is the most controversial. Namely, Epicurean epistemological theory, as well as other theories from the Hellenistic period, is motivated by two important questions: (i) whether knowledge is attainable at all; and (ii) if it is attainable, what are its foundations. Epicurus' answers to these questions show that he wants to defend the possibility of knowledge and to claim that the foundation of knowledge is our sensory experience. By claiming that knowledge is attained through the senses, Epicurus is placing himself on the side of empiricist tradition. What distinguishes his understanding of empiricism from that of other Greek philosophers is his rather controversial way of defending it, by claiming that *all* perceptions or sense-impressions are true. Therefore, by accepting the thesis according to which perceptions are taken to be the incorrigible foundation of our knowledge, Epicurus commits himself to an extremely radical version of empiricism.

However, what is even more surprising is that his strong epistemological empiricism is combined with and even defended through atomistic theory, according to which the knowledge of the real structure of the world goes beyond the scope of our experience. Therefore, knowledge of the world based on the atomistic theory diverges from empiricism and even seems to defeat it. Before Epicurus, the founder of Greek atomism, Democritus, accepted that the theses are irreconcilable and, as evidence suggests, he gave up the possibility of knowledge of the phenomenal world. In contrast, Epicurus wanted to save both kinds of knowledge and thus produces an obvious tension. On the one hand, he wants to ensure the possibility of empirical knowledge which is in accord with naïve realism. On the other side, he endorses atomistic theory, which claims that the world's ultimate structure consists of atoms and void. In the thesis I shall examine the way Epicurean epistemology solves the problem. Epicurean solution is established on the thesis of perceptual infallibility

and my main aim is before all to offer a plausible interpretation to support the thesis. The task is challenging since it does not presuppose a sophisticated philosophical education to offer a few examples in which perception tricked us and thereby refutes Epicurus' thesis. Nevertheless it is hardly believable that Epicurus and his followers, who continue to defend his philosophy for almost four centuries, were not aware of these difficulties themselves, so the reconstruction of the arguments in favor the thesis becomes more challenging. But before starting with an introductory overview of the main epistemological arguments and the aims of the thesis let me say a few things in order to say something about the notion 'Epicurean'.

Namely, as the title indicates, in the thesis I examine not only Epicurus' own writings as the primary sources but also the writings of his followers for which I take together constitutes the Epicurean philosophical system. The reason for this is that the doctrines of later Epicureans follow very closely the canonical texts set out by Epicurus himself with insignificant divergences. Such a strong cohesion in the philosophical systems is rather unique characteristic of the Epicureanism in comparison with other ancient schools, such as Platonic, Aristotelian or Stoic, especially if we have in mind that Epicureanism endures for almost four centuries. The reason for the stability in the Epicureans' teachings lies in the fact that the school was established more as a doctrinal community in which Epicurus' authority was respected and devotedly worshiped both during his life, but more importantly, long after his death. Epicurus himself assured the survival and cohesion of his philosophy, primarily through the method of transmission of his doctrines: the students and advocates of Epicureanism were supposed to memorize the main postulates. And in his last will Epicurus secured the continuation of his philosophy by setting out the continuance of the five commemorative offerings, annual and monthly: first to celebrate death of his mother, father and three brothers, then the celebration of his birthday, next monthly celebration to commemorate Metrodorus and himself and finally the celebrations in the month of Poseidon for his brothers and in Metageitnion a cult for Polyaenus (DL X.18). The doctrines postulated by Epicurus around which his followers and all later loyalists gathered were practical guidance towards happy life devoted of disturbance and pain. Therefore to embrace the main postulates of Epicureanism was in fact to embrace a way of life around which this strong communal identity was built. This does not mean that there were no innovative ideas and arguments in the school, but the fact is that the key postulates, together with terminology and methodology remained the same.

The foremost evidence is Lucretius'(c. 94-55 BC) work *De rerum natura* in which he expresses his deep admiration to the founder of the Epicurean philosophy he defends as the

only philosophy that reveals truth about the world. David Sedley goes that far to prove that Lucretius actually was completely ignorant of any philosophical debate of his time and completely focused on Epicurus' work and Epicurus himself.[2] In the time when Lucretius wrote his book, near Naples was active an Epicurean school whose founder probably was Philodemus (Cicero, *Fin*. II.119).[3] His survived work *On Signs* is one of the most important pieces of evidence for the understanding of the methods of testing beliefs and sign-inferences in Epicureanism and their engagement in the debates with other schools of their time. Nevertheless, Sedley points out, as "Philodemus' writings make clear, it was normal for contemporary Epicureans to assign virtually biblical status not to the writings of Epicurus alone, but jointly to those of the foursome known simply as *Hoi Andres*, 'the Great Men'. These infallible four were the founding figures of the school, Epicurus, Metrodorus, Hemarchus and Polyaenus, and all four were treated as absolutely authoritative".[4] On the same line of thought De Lacy's observation further explains the customary practice of the Epicurean school in which "it was an established tradition among Epicureans to devote much of their time to the refutation of the philosophers of other schools; and we find as early as the third century B.C. that the Epicurean Colotes undertook to prove systematically that every philosopher was wrong except Epicurus".[5] Therefore, I take it that this offers a ground to speak and explore Epicurean epistemology which was established upon Epicurus' doctrines and preserved their original meaning.

Epicurus' philosophical inquiry was driven by our need to understand the sources of unhappiness so he recognized that the main disturbance for a happy life proceeds from false beliefs, primarily about the gods, celestial phenomena and death. In the *Letter to Herodotus* Epicurus writes:

> Among the celestial phenomena movement, turning, eclipse, rising, setting and the like should not be thought to come about through the ministry and present or future arrangements of some individual who at the same time posses the combination of total blessedness and imperishability. For trouble, concern, anger and favour are incompatible with blessedness, but have their origin in weakness, fear and dependence on neighbours. Nor should we think that beings which are at the same time conglomerations of fire possess blessedness and voluntarily take on these movements. (DL X.76-7, transl. LS 23C)

[2] In his Sedley (1998) he offers a reconstruction of this argument based on the idea that the main source Lucretius had for his poem was Epicurus' *On Nature*.
[3] For an extended discussion see De Lacy (1978), Asmis (1984).
[4] Sedley (1998), 67-8.
[5] De Lacy (1978), 153. Cf. Plut. *Adv. Col*. 1107 E.

So correct beliefs that the gods do not interfere in human affairs, that celestial bodies are not divine, as we are told in the passage, together with the belief that "death is nothing to us" (DL X.124) will take away the fears and conduce to a good life. Therefore, what becomes the crucial condition for happiness is the requirement to have true beliefs about the world we live in. For Epicurus this consequently opens the need for a scientific investigation through which genuine knowledge about the things in the world is to be obtained. Therefore, epistemology which is supposed to give us knowledge of the world around us becomes closely connected to physics and both subordinated and necessary for ethics. Although the function of epistemology within this general framework is more instrumental, Epicurus offered a unique epistemological doctrine and opened some entirely new problems that marked the beginnings of epistemology as a separate discipline in Epicurean philosophy.

Since objective knowledge about the world becomes a matter of supreme importance, Epicurus regarded that this aim required establishing the means by which knowledge can be gained. To establish the means for Epicurus was to set out the criteria of truth, that is, the standards by which the truth is ascertained. Epicurean epistemology was called canonic because of Epicurus' work *About the criterion, or Canon* (DL X.27), where 'canon' literally means a yardstick or rule or straightedge. The title suggests that Epicurus sought to find an epistemological tool equivalent to the canon metaphor, namely the straightedge for 'measuring' truth. According to the sources Epicurus held that there are three separate criteria: perceptions, preconceptions and feelings (DL X.31; Cicero, *Acad*. II.142). The first two are the criteria for theoretical knowledge, whereas feelings are specifically criterion for action.[6] I will not go into debate about feelings as the criteria, since to deal with them would go beyond the interest of the thesis. Therefore, I shall focus on the remaining two: perceptions and preconceptions.

In the first chapter I shall introduce the term 'criterion' and explain the general context in which the debate about the criterion of truth is developed. Commentators usually speak about 'epistemological turn' in order to explain specific changes and the shift of interest that marked the beginning of Hellenistic epistemology, with Epicurus as the one that opens this debate. I shall follow that line of interpretation arguing that Epicurus' main motivation lies in the kind of atomistic skepticism according to which phenomenal knowledge is impossible. Therefore, in this chapter I will say something about possible antecedents of skepticism before Epicurus, that is, atomistic skepticism. Consequently Epicurus' quest for the criteria of

[6] Epicurus said that from pleasure "we begin every choice and avoidance, and we come back to it, using feelings as the yardstick for judging every good thing" (DL X.129, transl. LS 21B). Cf. DL X.34, Cicero, *Fin* I.23.

truth is the reaction to atomistic skepticism and his aim is to secure the possibility of knowledge by appropriate methods as the canon metaphor suggest and to close the gap between phenomenal world and the world of atoms and void. Namely, I will argue that Epicurus' main epistemological aim of saving both phenomenal knowledge and knowledge provided by the atomistic theory is established upon rather peculiar strategy for this ambitious task: the claim about perceptual incorrigibility. This strategy becomes clearer in the second chapter which is dedicated to the interpretation of the central thesis that all perception is true.

So, in the second chapter I explore the first criterion of truth, perceptions, and examine interpretations of the central claim that all perceptions are true. The chapter is divided in two parts since I shall argue that Epicurus offers two different lines of argument to support the thesis that all perceptions are true, the first reflecting his motivation for the thesis and second justification of the thesis. I shall argue that Epicurus' motivation for the thesis about perceptual incorrigibility is defended independently of the atomistic theory based on the idea that unless we accept that all perceptions as true, knowledge will be impossible. In the second part of the chapter I shall explain that justification of the thesis that all perceptions are true is provided by the atomistic theory of perception. I shall argue that such an explanation offers a basis for the claim that the truth of perceptions should be understood as an exact match of perceptual content with its cause, namely *eidola*. I attempt to further clarify the infallibility of perception and its contrast to belief which can be true or false by interpreting perceptual content as non-conceptual. In my view this is precisely what enables perception to serve as the self-evident truth and the primary criterion of truth.

The third chapter is dedicated to the second criterion of truth, preconceptions. In the first part I shall discuss the origin of preconceptions and the way they are formed. I attempt to show that the process of formation is purely empirical since they are produced through repeated perceptions of individual instances of a particular type of thing which as a result produces a "universal stored notion", that is, preconception (DL X.30). In spite of the fact that they are completely dependent upon perceptions, preconceptions serve as the criterion on their own. However, the dependence upon perception secures that preconceptions are also self-evident, that is they do not need further proof. I shall argue that preconceptions are the means by which we recognize types of object, and as such are fundamental to Epicurus' account of how we gain knowledge of things. By this Epicurus attempts to reply to well known 'Meno paradox' and to show that preconceptions serve as the starting point for any inquiry. Besides this function, I shall argue that by preconceptions we engaged in the process of interpretation of perceptual content, its conceptualization which in the end enables us to form beliefs.

In the last chapter I discuss Epicurus' methods of testing beliefs. Beliefs about observable objects are tested by direct perception through the methods of witnessing or non-witnessing. Armed with self-evidently truths about observable world, Epicurus maintains that these truths can serve as signs for inferences about what is non-observable or non-evident. By establishing methods of counterwitnessing and non-counterwitnessing for testing beliefs about what is hidden from direct perception, Epicurus show the way in which we infer about the existence of atoms and other non-evident things on the grounds of perception. In the end this explains Epicurus' unique project of coupling empiricism and atomism.

In the thesis I rely primarily on Epicurus' own text, the *Letter to Herodotus*, saved in Diogenes Laertius' *Lives of Eminent Philosophers*. Diogenus' work is the major source since it brings relevant biographical information. But more importantly Diogenes offers very useful summary of Epicurus' epistemological doctrine and the theory of the criteria of truth Also he preserves two other original Epicurus' letters, the *Letter to Pythocles* in which he mostly discusses celestial phenomena and the *Letter to Menoeceus* dedicated to ethics. Besides three letters, Diogenes also preserves a collection of short Epicurus' sayings called *Principle Doctrines* (*Kuriai doxai*) which contains some significant arguments for the epistemological discussion. Another relevant source is Epicurus' book *On Nature* the fragments of which are found in a library in an Epicurean villa in Herculaneum.[7] Inevitable source of the later Epicurean philosophy is previously mentioned Lucretius' *De rerum natura* and Philodemus' *De signis* and also Diogenes of Oenoanda. From the camp of non-Epicurean writers which are often hostile in presentation of Epicureanism, relevant epistemological presentations of the doctrine we find in Cicero's *Academica*, *De natura deorum* and *De finibus*, in Sextus Empiricus, and Plutrach's *Adversus Colotem*.

I used translations from Long and Sedley's *The Hellenistic Philosophers, Vol. 1, Translations of the principle sources with philosophical commentary* where it was possible. For the paragraphs not included in LS, I used other available translations.

[7] The most extended work on the reconstruction and interpretation of the scrolls that were saved after erruption of Vesuvius is done by David Sedley. See his Sedley (1973), Sedley (1998).

1. THE ORIGIN OF THE PROBLEM OF THE CRITERION OF TRUTH

The central problem of Hellenistic epistemology is the problem of the criterion of truth. The word ‘criterion’ is used differently but it can be said that it is the transliteration of the Greek word which literally means a ‘means of judging’, and it is commonly used to signify the sense organs. However, in spite of the fact that the word is essential for the epistemological debate, we do not find within the writings of the main philosophers of that time precise explanation or discussion of the term. In the examination of the different usage of the word ‘criterion’ Striker emphasizes one philosophically important fact.

> The philosophical term of art *kriterion*, on the other hand, appears to be related with the Attic word *krites*, which refers not to a judge but to an “evaluator” (Fraenkel: *Beurteiler*) or arbiter – thus, for example, the person who judges the tragedies in a play contest (cf. Aesch. 3, 233; Isocr. 15, 27; Xen. *Symp*. 5, 10; Demost. 21, 18 – Debrunner, *Geschichte*, pp. 58-59). By a *kriterion*, then, is understood a means or instrument for evaluation, and by a *kriterion tes aletheias* in particular, a means for evaluating everything which can be characterized as true or false.[8]

Thus, the criterion of truth is in fact some kind of epistemological instrument that serves for testing and evaluating judgments, appearances, perceptions, or as Striker says, of all the things to which the truth value can be ascribed. But as a technical term in epistemology we cannot find it before 300 B.C. and the sources suggest that Epicurus is the first one who introduces the term into philosophical language in the sense of an epistemological instrument for ascertaining the truth. (DL X.31) However, if we proceed from this general account of the meaning of the term ‘criterion’ to specifying its characteristics or functions, we are faced with the diversity of the things that are taken to be the criterion of truth in the Hellenistic period, such as senses, reason or perceptions, appearances or preconceptions and concepts and consequently we can find that the term ‘criterion’ is used in a lot of different senses.

In spite of the diversity of meaning it seems possible to extract and classify a few types of senses in which the term ‘criterion of truth’ is used. The task of a systematic presentation of the meanings and usages of the term is done by Sextus Empiricus whose

[8] Striker (1996), 24.

systematizations is not concentrated only on the Hellenistic period but tends to classify its broader usage in antiquity. Historically Sextus stands at the end of the very long philosophical discussion about the criterion of truth and thus, having before him previous doctrines, he attempts to summarize and give us a retrospective analysis of all the main conception of the criterion. [9] However, we have to bear in mind that Sextus' approach to the problem is that of a skeptic and that his investigation of the term 'criterion' is to some extent biased by that theoretical background of the Phyrronian skepticism. The main sources for the discussion about the problem of the criterion of truth and the notion 'criterion' itself are *Outlines of Phyrronism* and *Adversus Mathematicos*.

Sextus' examination of the term 'criterion' contains of several divisions and classifications of the senses in which the term is used. Our focus here is the sense used in the explication of the problem of the criterion of truth, but it is important to notice that Sextus analysis of the term starts with the most general division of the two senses of the term 'criterion', namely the criterion of truth and the criterion of action (*PH* I.21). Sextus' stances towards the above mentioned criteria are radically different: while on the one hand his overall aim is to show that we should suspend judgment about the existence of the criterion of truth, he is eager to accept the existence of the criterion for action. I will briefly explain the latter criterion, since it will be important for understanding of Epicurus' criteria later on, and then will focus on Sextus' explanation of the different usage of the term 'criterion' in the context of the discovery of truth.

In *Outlines of Phyrronism*, when the distinction between the two senses of 'criterion' is introduced for the first time, Sextus defines the criterion for action as something "attending to which in everyday life we perform some actions and not others" (*PH* I.21). Sextus' acceptance of a practical criterion is rooted in the specific explanation of what regulates and guides human action and behavior, and more importantly in his aim to explain in what way the practical life of a skeptic should be understood. The main part of that explanation is related to the central skeptical method which suggests withholding belief about anything that is non-evident or "unclear" (*PH* I.13) and consequently obliges a skeptic to live a life "without holding opinions, affirming nothing about external objects" (*PH* I.14). In other words, skeptics propose to suspend judgment about everything external to us, such as tables and chairs, starting from having beliefs about physical objects in the external world to more

[9] Nevertheless, as Striker (1996) points out, Sextus probably took these divisions in usage and meanings from some handbook, which was probably the common source of that time, since almost the same division is found in Pseudo Galen's *De historia philosophica*.

complex cases of beliefs about the dogmatist theories and the philosophical arguments, because in all those cases we can never go beyond our appearances in claiming how things are in themselves. Sextus says:

> For example, it appears to us that honey sweetens (we concede this inasmuch as we are sweetened in a perceptual way); but whether (as far as argument goes) it is actually sweet is something we investigate – and this is not what is apparent but something said about what is apparent. (*PH* I.19)

However, this strategy leads to the famous objection to ancient skepticism according to which the skeptics' life is doomed to passivity, since participation in everyday activities presupposes having beliefs about the things we want to do and having beliefs is considered as a basis for human action and behavior. For example, what guides my action of taking an umbrella with me is a set of beliefs that it is raining outside, that rain will make me wet and that being wet is unpleasant for me. If according to Sextus, I am supposed to withhold beliefs about external things, what will explain my behavior that, for example, when it is raining I take my umbrella? Sextus' answer is that our actions are not guided by beliefs, but by appearances.[10] According to what is said, my behavior than is not explained by having beliefs about the rain, but only through giving assent to the passive appearances which are limited to the content of my immediate sensory experience.[11] This means that I give assent to a passive appearance that, for example, the rain is not pleasant, but I withhold further active formation of a belief that the rain itself is a kind of thing that is not pleasant. Sextus' claim that relying on appearances and withholding judgment about external things secure a criterion and guidance for practical life, 'allows the skeptics to live their skepticism' and leads to the final skeptical aim, tranquility of mind (*ataraxia*).[12]

We can leave aside the practical criterion and turn to the main subject of our investigation, the criterion of truth, which is introduced for the first time in this sense in the already mentioned passage *PH* I.21. Although Sextus does not name it there as *kriterion tes aletheias*, it is clear that he is talking about it because the definition is almost the same as in *PH* II.14, where he turns to the exploration of the criterion of truth itself and attacks it. What we find in both passages is the idea that the criterion of truth should "provide conviction about reality or unreality of something" (*PH* I.21) or that it is something "by which […] reality and unreality are judged". (*PH* II.14) Therefore, the general definition of the criterion

[10] For a discussion whether skeptics are guided by impressions or beliefs see further Frede (1987) and his article "The skeptic's beliefs", Burnyeat (1980) and his article "Can the Sceptic live his scepticism?".
[11] At this point again it is an open question whether giving of an assent is a belief or not.
[12] Cf. Burnyeat (1980) in n. 9 where he argues for the impossibility of a practical life for the Skeptics.

of truth according to Sextus in *PH* implies that the criterion of truth is something that should allow us to identify which of our appearances are true in the sense that they actually correspond with the objective nature of things and thus provide us with true beliefs about reality and consequently with the knowledge of it. However, this general definition of the criterion still does not tell us much about what kind of things the criterion is, it only gives us a vague idea that the criterion is some kind of "the most important prerequisite for judging truth and falsehood".[13]

We find a more specific explanation in *PH* II.15-17 and *M* VII.31-37 where Sextus examines the different usage of the term 'criterion' distinguishing the various senses of application. The first distinction is between three senses in which the term 'criterion' of truth is used, which are (i) general, (ii) the special and (iii) the most special sense (*PH* II.15; *M* VII.31-32). Sextus supplements the distinction with examples in which he states that when talking about the general sense of the term 'criterion' he has in mind natural standards of apprehension such as seeing, hearing, tasting and the rest of the sense organs; when talking about the special sense he thinks of every technical measure of apprehension such as ruler or compass; and finally, when talking about the most special sense he again mentions every technical measure of apprehension, but now the apprehension that is related with the non-evident things. The fact that in the last sense the criterion is connected with the non-evident things makes this criterion not applicable to everyday things but only to something that Sextus names as logical things (*ta logika*) or the things that are the subject matter of a logic or theoretical entities, used by dogmatic philosopher in order to determine the truth.[14] Probably what he has in mind here is the sense in which the criterion should provide us with a grasp of the truth about the non-evident or non-clear things (*adela*), such as for example the knowledge of atoms and void, while in the previous meanings the criterion grasps the truth of evident things (*enarges*), such as existence of bodies, if we take the example of one of the dogmatic school in Hellenistic philosophy.[15]

The next division is concerned with the latest sense of 'criterion', the logical one, which can be further divided into three senses: (a) criterion in the sense '*by which*' we make judgments (for example, by men or some other agent); (b) in the sense '*with which*' we make judgments (for example, through perception, intellect or both) and in the sense '*in virtue of which*' (for example, in virtue of the application or some similar act in which we perform the

[13] Striker (1996), 25.
[14] In contrast to *ta biotika.*
[15] However, Sextus is not very careful in this division since the inference about what is non-evident for him is due to the signs.

judging). Sextus' explanation of the distinction is found in *M* VII.35-37 where he uses the following metaphor to explain the 'logical criterion':

> For just as in the process of examining heavy and light objects there are three criteria, (i) the man who weighs, (ii) the scales, and (iii) the act of weighing, and of these the weigher is the criterion of the agent, the scales that of the instrument, and the act of weighing that of the use. (*M* VII. 36)

First thing that should be noticed about the metaphor is that Sextus' aim is to show that there is an analogy between the process of measuring heavy and light things and the process of "measuring" truth and falsehood. Next, the metaphor suggests that all the cases of measuring necessarily involve three things: first, an agent who is maintaining the measuring; second, an instrument, such as scale or straightedge, by which something is measured and finally, the particular act of measuring or the application of the instrument on the object that is measured. The same tripartite structure, as analogy with the differentiating between the heavy and light objects, should work in the cases of making a judgment or metaphorical measuring the truth. Namely, it is obvious that in order to tell the truth from falsehood we need to have an agent (*anthropos*) who is judging, just as we need an agent in any case of measuring. Next, likewise an agent needs some kind of equipment or instrument that enables her to differentiate heavy from light things, necessary equipment for making the judgment is perception (*aisthesis*) or reason (*dianoia*). And finally, to the particular act of measuring or the application of the weighing scale corresponds the very act of application (*prosbole tes fantasias*) of the cognitive instruments, perception or reason, or the using of perception or reason in order to differentiate truth from falsehood.

So what is significant from Sextus' elaboration of the different senses of the logical 'criterion' for our purposes? First, I would like to indicate a few points that can be extracted from Sextus' analyses about the general usage of the term 'criterion' in Hellenistic epistemology, after which I would like to point out some important features of Sextus' exposition for the understanding of Epicurean usage of the notion 'criterion'. We can start with the fact that Sextus' analysis starts from the extremely general definition of the criterion of truth, according to which the criterion of truth is something by which we determine truth about reality. It is significant that the definition from which he starts is wide and general enough and as such can be accepted by all philosophers who are using the term, both dogmatists and skeptics. However, as it becomes obvious from Sextus' examination of the term, there are certain important differences between the schools and change over time in usage of the term.

The target of Sextus' further analysis is the logical sense of the term 'criterion', where he offers again another classification, namely the tripod classification based on an analogy with the weighing. The tripod classification shows that the various senses of logical 'criterion' rely on the specific explanation of the act of measuring that involves three things: the agent, the instrument and. The term 'criterion' thus can be understood in three senses: first, in the sense of an agent who is making the judgment, next in the sense of an instrument by which an agent is judging and third, in the sense of the application of the instrument, or the act of judging. And although Asmis stresses that again, in this second classification the change is due to the increasing precision of the usage of the term, in the sense that "the second adds precision to the first, and the third to the second"[16], this does not seems to be so obvious as in the case of the first classification. On the contrary, it seems to me that while in the first classification we can sense the progress towards more precise and narrower usage of the term, in the case of second classification it seems that all three senses are of equal precision. This seemed to follow from Sextus' analogy with weighing from which we cannot conclude that the difference in the meaning of the term 'criterion' consists in the fact that the sense of the 'criterion' as measuring instrument adds precision to the sense as an agent who is measuring. More appropriate reading of the example suggests that Sextus' aim is to show that in every case of measuring we need three things, an agent, an instrument and the act of application of the instrument, but all three listed things serve as equal constituents of the explanation of the measuring process. And since the making of judgment is the process of measuring or determining the truth, the same works for the criterion in this case. Therefore, it seems that the difference in the meaning of the logical 'criterion' is not in the levels of precision, as suggested by Asmis, but rather in pointing to the different, but equally relevant *means* of every process of measuring. The dispute in Hellenistic epistemology, as skeptics attempt to show, is focused around the choosing one of the possible senses as the right one in order to secure the possibility of knowledge.

This common twofold usage of the term 'criterion' in Hellenistic philosophy reflects another interesting point relevant for the uncovering of the overall picture of the problem of the criterion of truth and its arousal from the problem of possibility of knowledge. It appears that the distinction of the meaning of the 'criterion' on the cognitive faculties on the one hand and the acts of perceiving or reasoning on the other guiding our discovery of truth, can be formulated in terms of more general epistemological questions concerned with the possibility

[16] Asmis (1984), 95-6.

of obtaining knowledge. Namely, when talking about perception or reason as cognitive tools by which we are discovering truth and gaining knowledge, in fact we are talking about the sources of knowledge. Likewise, the meaning of the 'criterion' as an act of application of the cognitive instruments and actual judging in terms of perceiving or reasoning, might be understood as a quest for a cognitive method that enables us to determine the truth. The debate about the notion 'crterion' suggests something general about the Hellenistic epistemology.

The epistemological debate in the Hellenistic period is usually presented as placed around the two main questions.[17] First of them asks whether there is such a thing as a criterion of truth. If the answer to the first question is positive, we are faced with the second one, namely, if the criterion of truth exists, what exactly it is. The reason for this lies in the fact that all major philosophical schools of that period, Epicureans, Stoics and Skeptics, presume that these questions must be answered in order to defend and justify the possibility of having any knowledge about the world. This is considered to be a serious 'epistemological turn' in ancient epistemology and something that sharply differentiates epistemological interest within the Hellenistic period from the previous debates on knowledge.[18] The main difference between the two periods of ancient epistemology is the following. It seems that philosophers before Hellenistic period of philosophy never seriously questioned the possibility of acquiring knowledge and quite firmly believed that we have knowledge of many things. Since they start with the assumption that knowledge as such exists, their epistemological interest was oriented toward finding the appropriate definition of knowledge, analysis of its structure and identification of the objects of knowledge.

This qualification, however, naturally leads us to the question of the causes or the circumstances that give rise to the 'epistemological turn'. Namely, why do we find the switch within the epistemological debate about knowledge exactly in Hellenistic philosophy and not before in ancient epistemology? Brunschwig indicates that we can explain the 'epistemological turn' by pointing out philosophical and historical considerations that underlie the process of shifting of the epistemological interest. Although he takes them to be two separate considerations, it seems to me that they cannot be separated, since philosophical consideration explains and overlaps with the historical one. This similarity will become clear when we see what Brunschwig says about the philosophical consideration. Namely he claims that,

[17] Striker (1996), 150.
[18] Brunschwig (1999), 229.

"…it seems natural to suppose that the birth of an epistemology worthy of the name – that is to say, of systematic reflection on the possibilities and the limits of knowledge, on its criteria and its instruments – implies prior existence of a sceptical challenge; for there must be something to jolt us out of the naïve complacency which marked our initial forays into the field of knowledge before we have taken stock of the intellectual means at our disposal. The gage will be thrown up – and picked up – only by men who have already lost their epistemological virginity."[19]

In other words, the philosophical reason for the 'epistemological turn' within Hellenism, according to Brunschwig, is motivated by skeptical challenges existing in the philosophical scene before the Hellenistic period. The epistemological turn is then considered as a transformation from the habitual epistemological pattern of Greek philosophers before the Hellenistic period who take the possibility to gain knowledge as true, without questioning it, to the more fundamental and challenging question of the overall possibility of knowledge in the first place. To put it differently, philosophers in Hellenism open the Pandora's box of epistemology by asking the epistemological question of the possibility of knowledge prior to the questions of its nature and structure. This means that the question about the possibility of knowledge is placed as the central since the pursuit for the reliable means for attaining the objective truth about the world has to be established before any account of what knowledge is. In the Hellenistic period this task is investigated under the problem of the criterion of truth which can be defined, according to Striker, as "the question of whether it is possible to distinguish with certainty between true and false opinions or assertions, and if so by what means"[20].

Regarding the historical background previous to the Hellenistic period, Gisela Striker, who has made the most comprehensive and overall research on the problem of the criterion of truth, makes the following point

"There must have been a skeptical undercurrent from the time of the sophists on, most notably in the Democritean school. But we have to turn mainly to Plato and Aristotle to recover some of the evidence, and it seems that they had little patience with doubts about the possibility of knowledge. Seeing impressive disciplines like mathematics, astronomy, medicine and other natural sciences develop, they may have found it unnecessary to worry about their very possibility, and more important to investigate the structure of scientific theories and the characteristics of scientific understanding."[21]

In the quoted passage Striker emphasizes two important points relevant for the explanation of the origin of the problem of the criterion of truth. Namely, she claims that on

[19] Ib., 230.
[20] Striker (1996), 22.
[21] Ib., 150.

the one side there had been skeptical endeavors previous to the Hellenistic period, but on the other the main philosophical figures of the classical period, Plato and Aristotle, had never taken the impossibility of knowledge too seriously. The view about the origin of the problem of the criterion, as presented by Brunschwig and Striker, recently is criticized by Lee.[22] She claims that it is wrong to assume that "earlier philosophy was marked by a naïve complacency about whether knowledge is really possible" for the following reasons:

> First, earlier thinkers anticipated many of the arguments employed by Hellenistic sceptics. "Sceptical" arguments were in the air from the period of the Presocratics on, although not in the form of a well-defined position, but in the form of certain loosely related ideas and arguments. And they did not go unnoticed; the potentially destructive force of these "sceptical" arguments was appreciated by philosophers like Plato, Aristotle, and Democritus. Their formulation of the problems confronting the possibility of knowledge, together with their responses and attempts at defusing those problems, would inspire and anticipate many of the debates between sceptics and their opponents in the Hellenistic period.

She supports her view by many passages of the philosophers in the classical period who seriously took skeptical arguments starting from the distinction between how things appear to us and how things really are. From this distinction they inferred that knowledge is impossible for either the metaphysical reason, which concentrates upon the impossibility of knowledge of the real nature of things (for example, Heraclitus), or for the epistemological reason, which emphasizes that the impossibility of knowledge is a result of limitations of our cognitive abilities (for example, Xenophanes or Democritus). Therefore, once the sharp distinction between appearance and reality is introduced, the gap between appearances and reality is opened and knowledge beyond appearances becomes doubtful. This implies that the account of the epistemological turn, with which I started and to which I am very inclined to, calls for some qualifications. It is not the case that philosophers in the classical period did not discuss skeptical arguments neglecting them as unimportant, which is suggested by Brunschwig quotations. On the other hand it is clear that these skeptical challenges were not discussed in a systematic way as it was later done by the Skeptics in the Hellenistic period, but nevertheless they were considered very seriously. Therefore, the changes within epistemology in the Hellenistic period are not so drastic and abrupt. The epistemological turn in the Hellenistic epistemology thus should be seen as a tendency towards a systematic analysis of the foundation and finding the firm starting point for ascertaining the truth of beliefs.

Another fact that also signifies something relevant for the understanding of the origin of the problem is the following. The evidence suggests that it was Epicurus' who introduced

[22] Lee (2010), 13.

the notion of the criterion of truth into the Hellenistic debate. (DL X.31) If this is so, given what is said so far, it appears that Epicurus is actually the one responsible for the epistemological turn and moreover that he is motivated by some kind of skeptical challenge. My attempt is to support this assumption and to argue that Epicurus is actually motivated by atomistic skepticism indicated in Democritean epistemology with which he was familiar. Of course, this is contradicted to the reports we find in the sources according to which Epicurus proclaimed himself to be self-taught and without formal education.[23] However, it is hard to believe so. The other pieces of evidence suggest more plausibly that Epicurus was influenced by two important philosophical figures of that time, namely his teacher, Nausiphanes, who was an atomist and a follower of Democritus[24], and the skeptic Pyrrho[25], who was Nausiphanes' teacher. It is also interesting that Pyrrho, as Diogenes reports, was familiar with atomism through Anaxarchus.[26] Finally, in Sextus' reports we find that Anaxarchus, together with Metrodorus adopted Democritean atomism, but also accepted its skeptical implications and rejected the criterion. Metrodorus formulates his position by saying that "we know nothing, nor do we even know the very fact that we know nothing"[27]. So, already this very brief teacher-student historical reconstruction implies that at the time of Epicurus' philosophical development there were present some versions of skepticism that traces its origins back to the work of Democritus. Leaving aside more careful historical reconstruction we can turn to another passage which appears to support my suggestion that Epicurus' theory of the criterion of truth is motivated by Democritean skepticism. In the following passage Plutarch delivers the following report:

> Colotes first charges him [Democritus] with assertin that no object is any more of one description than of another, and thus throwing our life into confusion. (Plutarch, *Adv. Col.* 1108F, transl. De Lacy)

Colotes is one of the earliest Epicurus' followers and as I explained in the introduction, there is no reason for not taking that Colotes claims were also Epicurus' own views. So, for what is actually Colotes accusing Democritus for? The accusation is based on the version of *ou mallon* or 'no more' argument, well known in ancient times.[28] This argument is found in the most cited Democritus' fragment which is usually considered to be a central for understanding

[23] DL X.12.
[24] DL X.12.
[25] DL IX.64.
[26] DL IX.61.
[27] SE *M* VII.87-88.
[28] For the extent discussion see De Lacy (1958).

of Democritus' epistemological considerations. We find it in Sextus, which is the most relevant source for Democritus' epistemology, where he reports Democritus saying the following:

> For from the fact that honey appears sweet to some and bitter to others, they say that Democritus deduces that it is neither sweet nor bitter, and for this reason utters the phrase 'No more', which is Sceptical. (SE *PH* I.213, transl. Annas and Barnes)

Ou mallon argument in the quoted passage indicates that the thing in question is 'no more' sweet than bitter. That is, on the basis of the cases of conflicting appearances in which the same thing, *a*, appear to be both F and not-F, we say that *a* is 'no more' F than not-F. What is the consequence of such a claim? In the following passage O'Keefe explains it in the following way:

> The theme that is consistent throughout the various *ou mallon* arguments is the move from the observation that some property of an object differs relative to different observers, times, or conditions (*a* is F to me, but not-F to you, or F under certain circumstances, but not-F under others) to the conclusion either that the object does not, in itself, have that property, or that we cannot know whether the object has that property or not.[29]

So according to O'Keefe there are two possible readings of *ou mallon* argument: (i) eliminative, according to which a is neither F nor not-F and (ii) that we cannot know whether a is F or not-F. However, to this we should add the third possible reading, relativistic, according to which a is both F and not-F, which was probably position of Protagoras as we find it in Platos' Theaetetus.[30] Sextus points out that Democritus' position is usually associated with skepticism, against which Sextus clearly argues. Namely by the time Sextus writes *ou mallon* arguments became a part of regular skeptical weapon and they were probably used in this second sense, from which the Skeptics infer to the suspension of judgment.[31] So Sextus emphasizes that Democritus' position is distinct from skepticism since Democritus uses *ou mallon* in the first, eliminative sense, proposing by that elimination of phenomenal qualities. As Sextus reports, Democritus by saying that honey is no more sweet than bitter deduces that honey does not have any of the qualities in question and by that affirms dogmatist's conclusion about the nature of honey, namely, that it is neither sweet nor bitter.

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[29] O'Keefe (1997), 125.
[30] *Tht.* 152d-157c.
[31] Cf. *PH* I.188.

In another often cited passage Sextus presents Democritus' position in the following way:

> For he says "By convention sweet and by convention bitter, by convention hot, by convention cold, by convention colour; in verity atoms and void." […] In fact we know nothing firm, but what changes according to the condition of the body and of the things that enter it and come up against it. […] And again he says "It has been shown in many ways that in verity we do not understand what each thing is or is not like. (SE *M* VII.135-6, transl. Bett = DK B9, B125)

We can say that from the quoted fragments it follows that Democritus thinks that the knowledge about the things in the world is limited to the extent that what we can know only the real nature of the things, namely their atomical structure. Phenomenal properties then appear to be just conventional constructs since they exist only within the relation between the observer and the atomical structure of the solid. What can be inferred than is the following conclusion about Democritean epistemology: given that the phenomenal properties are mere conventional constructs, there is no genuine knowledge about them, since knowledge is secured only for the real and intrinsic nature of the thing, and for Democritus it is knowledge of atoms and void. Given this skepticism cannot be associated with Democritus, at least not as a full blown rejection of any knowledge or as some other version of the argument that suggests total impossibility of knowledge.[32]

However, this only one possible reading of Democritus' arguments. What follows from Democritus' position is that the gap between the reality as it is reported by the sense on the one hand and the real nature of the things, that is, their atomic structure on the other, is now sharply differentiated. Phenomena are not genuine pieces of knowledge since they do not reveal truth, but just the contrary, they misrepresent the real nature of the things because of which what is in reality always remains beyond the scope of the reach of perception. But how did we loose the knowledge of atoms? Some passages strongly indicates that Democritus infers a total skepticism, for as Sextus reports, Democritus also claims that "However it will be clear that to know in verity what each thing is like is hopeless". (SE *M* VII.137, transl. Bett) So, on what grounds is built this other interpretation according to which Democritus is a full blown skeptic? The fragment that supports this reading comes from Galen where he says that Democritus rejects all knowledge saying "Wretched mind, you get your evidence from us, and yet you overthrow us? The overthrow is a fall for you." (Galen, *On medical experience* = DK B125, trans. Taylor) This suggests that Democritus is caught in the reductio,

[32] This reading is advocated by C.C.W.Taylor (1967), De Lacy (1958), O'Keefe (1997), Curd (2001).

since atomism being established upon sense-experience, falls together with the rejection of perception as unreliable.[33] The reductio can be expressed in the following form:

1. Knowledge is based on perception.
2. Perception leads to the atomistic theory.
3. The atomistic theory proves that perception does not reveal knowledge.
4. All knowledge is impossible.

In other words, atomist theory starts from the observation of the macroscopic objects and uses sense reports as a basis for the inference on the theoretical entities existing on the microscopic level. The theory, however, reveals that the true nature of things lies only on atomistic level, opening thus a gap between the appearances, which are claimed to be a mere conventional construction, and the objective reality explained in terms of different atomical configurations. But then, maintaining that the evidence from the senses is unreliable and proposing its abandonment cut off the very basis of the atomist theory and thus opens a possibility for a total skepticism in which not only phenomenal knowledge is rejected, but atomism as well.

In the end we are left with two different interpretations of Democritus, the former takes him to be a skeptic only in regards of phenomenal properties and the later presents him as a skeptic in regards of all knowledge. What can we infer from this that is relevant for development of Epicurean problem of the criterion of truth? Well, if we go back to Colotes' quotation it becomes clear that Epicureans infer some serious skeptical conclusions from Democritus' epistemology. Also some other sources indicate that philosophers after Democritus pushed further the epistemological consequences of his atomism and thereby they "watered the seeds of skepticism which they found sprouting in his epistemological nursery"[34]. The one who comes closest to this position is Metrodorus, who accept the utmost consequence of the unreliability of perceptions and reject knowledge saying that "None of us knows anything not even whether we know or do not know this very thing". (Eus. *PE* XIV.19.8 = DK 70B1, transl. Brunschwig)

The point I want to make is the following. The hypothesis I am suggesting is more cautious and neutral on the interpretation of Democritus' epistemology as either skeptical or not. In either case there is a reason to say that Democritus is aware of the problems that his epistemology faces and he puts them on the agenda. He questions and opens serious doubts in the possibility of knowledge about secondary qualities and the phenomenal world. This follows from the central epistemological problem Democritus puts forward according to

[33] Cf. Barnes (2001).
[34] Brunschwig (1999), 235.

which there is a strong discrepancy between the world of experience and the world explained by atomistic theory, since only the latter reveals the real nature of the world. What opens the gap between the sensory experience of the world and the world itself is the conflict within our perceptual reports, expressed in the form of *ou mallon* argument which strongly suggests that the sense reports are not reliable. And it is important to notice that for our purposes it is completely irrelevant whether Democritus himself in the end adopts total skepticism or not, but the main point is that he notices this gap and leaves the possibility for drawing skeptical conclusions wide open, which was probably done by some of his later followers. The more important problem, to which Epicureans concentrate, was that abandoning perception makes the epistemology in Democritus' terms deeply problematic because of the unwanted consequences fatal for both phenomenal knowledge and for the atomistic theory.[35] So no matter what Democritus' views about the possibility of knowledge actually were, the possibility of losing knowledge was one very possible threat.

So, my point is that the most fatal consequence to which Epicurus reacts in my opinion is that the total rejection of perception is fatal for atomism. This than has further consequences observed by Colotes, and similarly reported by Lucretius who says the following:

> For not only would all reasoning come to ruin, but life itself would at once collapse, unless you make bold to believe the senses, avoiding precipices and all else that must be eschewed of that sort, and following what is contrary. (Lucretius, *DRN* IV.507-512)

So the rejection of perceptions according to Lucretius leads to the practical impossibility of life, since without perception it is impossible to form any other belief and basis for humans to act. This means that in order to perform any basic action, such as avoiding precipices, it is necessary to have beliefs that guide one's action, namely beliefs that there is a precipice in front of me and that not avoiding precipices is dangerous. But one of the most natural ways to form the belief that there is a precipice in front of me is to see it since seeing gives us the primary evidence that there is a precipice.[36] Therefore, abandoning perceptions leads to the impossibility of making belief which finally ends up with the inability to act.

Another similar report of comes from Diogenes of Oenoanda, a later Epicurean known as extremely faithful to Epicurus' original doctrines, who reports Democritus' position

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[35] Cf. Aristotle *On Generation and Corruption*, 315_b6-15, 325_a24-26.

[36] There are also other ways of forming the belief in question, e.g. someone might tell us that there is a precipice or it might be indicated on the map.

similarly to both Colotes and Lucretius, but also states the unwonted implication of Democritus' position. Diogenes writes the following:

> Democritus made an error unworthy of himself in saying that only the atoms that the only the atoms exist in reality, and everything else by convention. According to your theory, Democritus, we shall be unable, not merely to find out the truth, but even to live, avoiding neither fire nor murder. (Diogenes of Oenoanda, fr. 7, transl. Smith)[37]

So what appears from the reports of the Epicureans is that they consider Democritus to claim that knowledge is possible only of atoms and void, which means that they do not regard him as obliged to the thesis about a total impossibility of knowledge. However, they take it that he infers to unreliability of perception, probably from their relativity and conflicts within perceptions, and exactly by that he faces skeptical difficulties: by perceptions we infer to atomism, so if atomism denies perception, there is no starting point from which inference about reality can proceed. What the Epicureans actually realize is that perception and atomism, to say it colloquially, 'together stand and divided they fall'. I take it that this is the reason why Epicurus starts to seek a firm starting point for knowledge, that is, he seeks the criterion of truth in order to defend atomism, but more importantly to defend his moral theory.

As it is reported by Diogenes Laertius, the principal epistemological work of Epicurus in which he discusses the problem of the criterion of truth, is entitled *The Canon* (DL X.31) and it is probably one of the first works in which the notion of criterion is developed and used as a technical epistemological term. Therefore, the branch of philosophy in Epicurus that deals with the problem of the criterion of truth and other epistemological issues is called Canonica. Previous Sextus' discussion introduces the instrument metaphor in order to illustrate one of the senses in which the term 'criterion' is used, namely as a tool, such as scales for discrimination of heavy and light things. The metaphor thus implies that regarding truth and falsity the criterion is supposed to be some kind of cognitive tool for the discrimination of beliefs. Exactly this metaphor lies at the core of Epicurus' understanding of the term 'criterion' and the function it has within the problem of securing true beliefs about reality and knowledge of it. There is, however, an ambiguity over proper sense in which Epicurus is using the term 'kriterion'.

The term 'kanon' literally means carpenter's straightedge or yardstick, namely an instrument used for ascertaining straightness and Epicurus uses the term 'kanon' in that case

[37] For a full account of the fragment see Smith (1971).

synonymously with the term 'criterion'.[38] By this Epicurus strongly suggests that the criterion of truth should be understood in accordance with the instrument analogy, namely as an instrument for determining the truthfulness of our beliefs. That instrument for Epicurus are the senses, and as we shall see later, also the mind.[39] Striker takes this to be one of the senses in which Epicurus understands the term 'criterion', namely the one that literally goes along with the instrument or 'kanon' analogy and labeling them as "means of judgment"[40]. In other words, an analogy is drawn on one side between a straightedge and the sense organ and on the other between the straightness and the truth. For this sense of the term 'criterion' as a cognitive faculty, Striker says that it is the most prevailing, but philosophically not so interesting.[41] To put it differently, in this sense the term 'criterion' keeps the strict connection with the instrument metaphor, since the sense organ itself literally plays the role of an instrument or a tool, and the functioning of the organ is to be understood as application of a straightedge in the act of measuring. However, this is not the only possible sense in which Epicurus understands the notion 'criterion', since he speaks about the perceptions and more importantly preconceptions as well.

In this other sense, the notion of criterion is applied to perceptions and preconceptions in which they are not understood as the cognitive faculty. In other words, this second usage of the notion 'criterion' is more abstract, since it seems that Epicurus is turning away form the functioning organ as means of discovering truth to the *content* of perceptions and preconceptions. We can understand this as moving away from the literal instrument metaphor in which we have an understanding of the criterion in the sense of cognitive faculty to the understanding of the criterion as the faculty of judgment. Namely, if we take it that the criterion of truth is perception than we are not speaking strictly about the instrument metaphor, since with the content of perception we cannot draw a precise analogy to an instrument as it is possible if a sense organ is the criterion. In this case what is emphasized is that the criterion serves as the grounds for making judgments. This is in accordance with usual reports that ascribe to Epicurus the following criteria. Diogenes reports that Epicurus in *The Canon* lists three criteria of truth: sense perceptions (*aistheseis*), preconceptions (*prolepseis*) and feelings (*pathe*), and his followers later added a fourth to this list, application or focusing of mind (*phantastike epibole tes dianoias*). Diogenes' report is parallel to another

[38] Cf. DL X.38, 51.
[39] Epicurus, as we shall see later, introduces a peculiar theory of mind in which the mind functions as it were a sixth sense organ producing a mental perceptions.
[40] Striker (1996), 31.
[41] Ib., 151.

important sources, namely Cicero's *Academica,* where we find that Epicurus is "limiting the criteria to the senses, our conceptions of things, and pleasure" (*Luc*. 142) and Philodemus' report in *De Signis* where he states that the things called criteria are "perceptions, preconceptions, mental perceptions and feelings". (*De sign*, fr. 1)

Obviously Epicurus was not very careful with this distinction. Anyhow, is not wrong to say that the Epicurean epistemology in general, or canonic is the quest for cognitive tools by which we can measure truth and falsehood, that is, he is concerned with the establishing of a prerequisite for ascertaining the truth. Also it is evident that he allocates the special role in this process to perceptions. The reason, as I argued is the threat of Democritean skepticism. Epicurus obviously wants to defend the idea, indebted also in Democritean epistemology, that perceptions are considered to be a candidate for a criterion because of their specific nature which enables them to "provide evidence on the basis of which we judge (*krinomen*) what is true and what false, just as the evidence of witness in a court is used by the judge to determine the truth of the matter in dispute".[42] In other words, this 'forensic analogy', as Taylor calls it, suggests that perceptions can be taken as criteria of truth only if they are sort of things that reliably witness objects in the world or in other words, if they are themselves reporting truth.

The evidential character of perceptions is very close to a commonsense explanation of how we get to know the truth about reality. The first plausible answer, not yet entangled in serious epistemological debate on the problem of knowledge, would primarily suggest that our natural cognitive faculties, such as perception, are the reliable and primary sources that provide us with information about reality. And although learning bits of epistemology and facing skeptical arguments, such as conflicting appearances might weaken our initial inclination to trust the report of the senses, philosophers who continue to defend the commonsense explanation of how knowledge of the external world is attained are not so rare in the history of philosophy.[43] It seems that Epicurus stands at the beginning of that tradition. The qualification I want to emphasize is that I will refer to the common sense as referring to somewhat naïve reliance on the reliability of the senses common to all human beings and assume that perceptions truly and directly report properties of objects in the world and thus can be taken as a firm foundation for knowledge. Given this, the position from which

[42] Taylor (1980), 109.

[43] The reference to the commonsense is made by some other scholars such as Bailey (1928), Annas (1991), Scott (1995). For example, Bailey throughout his interpretation insists on ascribing to Epicurus commonsense intuitions calling him 'the apostole of common sense' and maintains that „Epicurus made an emphatic return to the view of common sense: if his system was to be intelligible to the ordinary mind, he must start from its normal presumptions. As the root-axiom of all inquiry he affirms the truth of reality – for to him they are identical – of the external world as known to perception" (237). I take it the 'common sense' as refering to the cases in which we would say that phenomenal properties are part of the world, that is, as similar to naive realism.

Epicurus proceeds, I will argue is close to the naïve realism. In other words, it seems to me that for Epicurus acquiring any knowledge about the world has to start with the senses since the senses are the first and primary tools we use to discover the true nature of the things in the world. However, what he has to prove is his claim that all perceptions are infallible. The defense of this thesis, I will argue in what follows, is motivated by Democritean skepticism.

2. EPICUREAN CRITERIA: PERCEPTION

Generally speaking, the account of perception as the criterion of truth can be summarized as interpretation of Epicurus' central epistemological thesis that all perceptions are true. This task might seem doomed to failure since the cases of false perception, such as illusions, hallucinations, are more than obvious not only to an epistemologist. However, I believe that this was obvious to Epicurus as well, which in the end confronts us with a dilemma: we can either proclaim his epistemology as one big farce, as many ancient philosophers did, and dismiss him as a serious philosopher, or we can take it as a challenging and interesting puzzle and try to understand Epicurus' argument for the thesis. In my opinion, although the thesis is controversial and counterintuitive, careful investigation of the main sources shows us that Epicurus' claim for the truth of perceptions is not so hasty but supported with some serious arguments.

I will try to show that the arguments for the thesis divide into lines of arguments that can be analyzed separately. On the one side, we can find arguments that support the thesis of the incorrigibility of perceptions in the fashion of the commonsensical line of thought already indicated in the previous chapter. Namely, this line of argumentation further explain Epicurus' motivation for taking perceptions as a secure foundation of our knowledge that leads him to the formulation of the thesis. What makes these arguments different from the other group is the fact that they can be understood as 'a priori' arguments for the claim that all perceptions are true, where 'a priori' means that they are developed independently of the atomistic theory. The other line of argumentation relies on atomism and further explains and justifies the thesis. My aim is to show that these two lines are separate, and that in order to establish the thesis and justify it, Epicurus is motivated by reasons independent of the atomistic theory. However, the real justification of the perceptual incorrigibility will be explained through the atomistic theory of perception, since his final aim is to shoe that phenomenal knowledge and atomism are compatible. Thus in the other line of arguments I will explore three things: first, the mechanism of perception, second the content of perception is, and finally I will offer an account of what Epicurus' understanding of truth is. Therefore, I will claim that while the reasons motivating Epicurus to establish and justify the thesis that all perceptions are true are independent of the atomistoc theory, the establishing of the thesis itself than is aimed to prove the atomism and to get further support by the atomistic theory.

A similar version of the development of the central Epicurean epistemological thesis can be found in Striker and Asmis. Striker clearly explains that there are two possibilities of

the way Epicurus reached the thesis, namely "either through analysis of perception, which convinced him that all sense impressions are true […] or his initial arguments for the thesis were independent and the analysis was developed later to defend the thesis against obvious objection"[44] We shall see later to what degree these two lines of arguments are independent; so far it is enough to address the central idea of Striker's interpretation. In Asmis' work, this idea of separating two groups of arguments underlies her reconstruction of Epicurean epistemology as a specific scientific methodology that guides our quest for truth. She claims that we have to differentiate between the pre-theoretical methodological principles and their posterior justification, emphasizing that it is important to keep the two lines of argument separate since "the initial rules are stipulative; and although they may be cleared up by explanation, they must be applicable without the benefit of theory".[45] My argumentation will mostly follow and rely on Striker's and Asmis' main ideas in order to show that these arguments are separate and independent of atomistic theory. I will try to show that this is important because of the following.

Epicurus by accepting the thesis, according to which perceptions are taken to be the incorrigible foundation of our knowledge, commits himself to an extremely radical version of empiricism. This implies two important things. First, the claim for providing incorrigible foundation for knowledge reflects Epicurus concern with the threat of Democritean skepticism. As I previously argued the problem of the criterion of truth occurs in the Epicurean philosophy as a reaction to previous skeptical inclinations and the arguments that proceeds from the various cases in which from the relativity of phenomena their unreliability was inferred. I believe that this skeptical challenge posed by Democritus has important motivational force for the thesis about truthfulness of all perceptions before the atomistic theory is revealed, simply because we need to secure the absolute reliability of perceptions, that is, to establish them as a firm starting point from which other truths, i.e. atomism, can be inferred. Second, in the second stage then Epicurus' strong epistemological empiricism manifested in the thesis that all perceptions are true is combined with and further defended through atomistic theory, according to which the knowledge of the real structure of the world is not within the scope of our experience. By putting these seemingly irreconcilable theses together, Epicurus meets the tension introduced by Democritus. But unlike Democritus Epicurus wants to ensure the possibility of empirical knowledge which is in accord with naïve realism. At the same time he also endorses the atomistic theory, which claims that the world's

[44] Striker (1996), 86.
[45] Asmis (2009), 84.

ultimate structure consists of atoms and void. The fatal consequence by which knowledge of the world based on the atomistic theory diverges from empiricism and even defeat it in Epicurus view, I will argue, is supposed to be solved by the acceptance of the truthfulness of all perceptions. I will try to argue for this through the separation of two lines of arguments for perception as the criterion of truth. The reason for this I find in the specific function Epicurus allocates to perception, namely to serve as the sign for inferences of what is unobserved, such as atoms and void.[46] Given this, the crucial part of Epicurus' epistemology is that the defense of the atomistic theory lies on the acceptance of truthfulness of all perception. In my opinion this strongly suggests that the arguments for reliability of perception have to be established previously to atomistic theory, implying that the justification of perceptual incorrigibility based on atomistic theory will be developed independently. In this way, the epistemological theory in whole avoids another problem, namely the objection of circularity according to which the atomistic theory is justified through the thesis of perceptual ineffability and vice versa.

Therefore, I propose that we need to separate these two lines of arguments because by doing so we are able first, to relate Epicurean epistemology to skepticism as an originator of the problem of criterion of truth; second, it will help us to solve the tension problem between empiricism and the atomistic theory; and finally, the separation of the two lines of argument helps us to avoid the objection form circularity. In what follows my aim is to give textual support for the first line of arguments that reflects Epicurus' motivation for taking perceptions to be the first and the most important criterion. As I already indicated in the introductory part, my attempt is to emphasize that here Epicurus is driven by a Democritean skepticism but also by a commonsense understanding of the role perception have in acquiring knowledge about the world – we rely on the fact that perception tell us what the world is like. Since I will try to show that these arguments are independent from atomistic theory of perception, I propose to call them 'a priori' motivational arguments.

2.1. 'A priori' arguments for the thesis 'all perceptions are true'

Tradition before Epicurus recognizes two main sources for knowledge about the world: sense perception and reason. Epicurus puts himself on the side of empiricist, insisting that all knowledge must proceed from sense experience, since perceptions provide primal

[46] Sign inferences are the topic of the last chapter on methodology of testing beliefs.

cognitive contact with the external world. The thesis about perceptual incorrigibility becomes the cornerstone of his epistemology. The crucial question concerns the problem of the way Epicurus develop his central thesis. We may begin the analysis of his position with the following argument, usually taken by scholars[47] to be the major argument to indicate the supremacy of perception:

> If you fight against all of your perceptions (*aisthesein*) you will not have a standard against which to refer even those judgments which youpronounce false. (*KD* XXIII, transl. Hicks)

This quote, although very short and concise, summarizes in fact the core idea of Epicurean epistemology based on sense-perception as the criterion of truth, but more importantly, it also guides us towards specific arguments that reveals why Epicurus adopts very specific epistemological position. The quote undoubtly show that Epicurus firmly takes sense perceptions to be the origin of any judging and discrimination between truth and falsehood and also indirectly implies that we have to take all of them as true. However, our main task is here to explain the reasons Epicurus has for the claim that the perception are the criterion of truth and furthermore, why he takes all of them to be true.

The second part of the quoted sentence indicates the possible answers to the posed questions. Epicurus straightforwardly asserts that unless we take all perceptions to be true, we are left without the possibility of judging or of distinguishing truth from falsehood. In other words, knowledge is not possible unless *all* perceptions are true. The versions of this argument we find in several other sources, predominantly in the work of Cicero who in several different places reports that according to Epicurus unless all perceptions are true, knowledge is not attainable.[48] It follows from this quite obviously that Epicurus' aim is to show that there is an ultimate and exclusive connection between perceptions and knowledge, such as that falsity of perceptions threatens the possibility of knowledge. The reason for taking this to be the fundamental epistemological aim as I argued lies in Epicurus' main concern which is to secure the possibility of knowledge. The way he sees this epistemological project is by providing us with the standard or the criterion by which we can firmly determine the truth necessary for acquiring knowledge of reality. Therefore, what underlies Epicurus' consideration is the problem of the criterion of truth in general initiated by the skeptical inclinations. Namely, if we do not have the criterion of truth, there is no knowledge of the

[47] Striker (1996), Sedley (1987), Bailey (1928).
[48] Cicero, *Luc*. 25, 79.

external world, because we are left without the possibility of distinguishing truth from falsehood.

Although some scholars question this idea[49], I argued that Epicurus' is aware of the skeptical threat and that he sees the solution to the problem in taking sense-perceptions to be the criterion of truth. The skeptical challenge indicated by the Democriteans relies on the strong discrepancy between the world of experience and the world explained by atomistic theory which consequence is that the latter refure the former. Now we see that Epicurus proposes a specific epistemological framework in which he maintains that the possibility of *any* knowledge is guaranteed exclusively on the assumption of the incorrigibility of all perceptions, since otherwise, knowledge is impossible and skepticism wins. So we see that Epicurus' method by which he attempts to close the gap starts first from proving the incorrigibility of perceptions as the foundations of all knowledge. So finally, the reply to Everson, who is not convinced that Epicurus is motivated by skepticism, might be this. The version of skepticism Epicurus is confronted with is the one that is directed primarily to denying the possibility of the objective knowledge of phenomenal properties. It is inspired by the relativity of perception which implies that the reports of the senses do not discover the true nature of things and from this follows the conclusion that the true and objective nature of things stays out of our epistemological grasp. To put it differently, falsity of perception means that they do not discover the real nature of the things and therefore must be abandoned as a secure guide towards the truth. In its final consequence, this leads to another fatal implication for atomism as a theory that secures us with knowledge of reality, because the unreliability of perceptions undercuts the foundation of atomism itself. Therefore, Epicurus' first aim is to prove that the knowledge of phenomenal properties is possible.

So far it becomes clear that Epicurus does not establish the thesis about perceptual incorrigibility straightforwardly. Scholars agree that the form of argumentation for the thesis that all perceptions are true is not straightforward since Epicurus establishes it by showing that other possible options we might hold concerning the truthfulness of perception are just false.[50] In other words, as Long and Sedley[51] put it, it seems that Epicurus' strategy is to show that (a) skepticism, according to which all perceptions are false, and (b) the thesis that some perceptions are false and some true, cannot hold. Therefore rejection of those two options leaves only one remaining option, namely, (c) that all perceptions are true. I agree with Long

[49] Everson (1990).
[50] Cf. Striker (1996), LS (1987).
[51] LS, ch. 16.

and Sedley that Epicurus' reply to the skeptic is grounded in examinations of these possibilities, starting first with the global rejection of perceptions in *KD* XXIII, and second in *KD* XXIV considering the option that some perceptions are true and some false. However, I find that there are two questionable points with the next steps in Long and Sedley's reconstruction. First, is their interpretation of Epicurus' reply to skepticism based on self-refutation argument one that Epicurus most probably has in mind? Or to put it in a more broad perspective is self-refutation argument necessary for establishing the thesis about perceptual incorrigibility as it is argued by Long and Sedley? And second, does this strategy according to which Epicurus establishes the thesis that all perceptions are true by elimination of other two possible options truly reflect Epicurean motivation with this issue?

Long and Sedley's interpretation of Epicurus' strategy against skepticism formulated in that particular way relies on the evidence of the following passage of Lucretius:

> Moreover, if anyone thinks that nothing can be known, he does not even know whether that can be known, since he declares that he knows nothing. I will therefore spare the plead cause against a man who has placed his head in his own footsteps. And yet even if I grant that he knows that, still I will ask just this: since material things had no truth for his vision to begin with, how he knows what it is to know or not to know as the case may be, what gave him the concept of true and false, what evidence proved that the doubtful differs from certain. (Lucretius, *DRN* IV.469-77, transl. LS 16A)

Scholars agree that this passage offers two arguments against the skeptic. The first two sentences contain the first argument according to which skepticism is a self-refuting position. The rest of the passage gives the second argument which refutes skepticism as conceptually indefensible by showing that the skeptic's use of the concepts of truth and falsehood is illegitimate. However, scholars disagree about the target of Lucretius' argument, specifically whether Lucretius is presenting the original version of skepticism confronted by Epicurus or a version developed subsequently, current in Lucretius' own time.[52] The problematic part of Lucretius text that opens the debate whether Lucretius is closely following Epicurus or giving arguments of later Epicureans is the one that put forward the self-refutation argument or *peritrope*[53], that became a famous and standard tool against relativism and skepticism in ancient epistemology. However, in Epicurus' saved writings the self-refutation argument is not used against skepticism. This problem seems to be relevant for our present purposes since we are dealing with Epicurus' motivation for his thesis that all perceptions are true, and the crucial element for establishing the thesis is refutation of skepticism, i.e. the claim that all

[52] See discussion in Sedley (1998) and Paul A. Vander Waerdt (1989).
[53] SE *M* VII.389-90.

perceptions are false. So the first task is to explain whether Lucretius' version of skepticism, as Long and Sedley understands it, indeed reflects Epicurus' own understanding of the issue and second is to do the same comparison for the versions of refutation of skepticism in Lucretius and Epicurus.

Let us examine Lucretius' arguments more closely to see if there is enough evidence for taking Lucretius' version of skepticism to be the same Epicurus has in mind. His overall anti-skeptical arguments as reconstructed by Sedley have the following structure[54]:

S1 A self refutation argument: the sceptic's thesis undermines his own commitment to it, in that he cannot claim to know whether it is true (469-72).
S2(a) An argument questioning the sceptic's access to the conceptions needed to make his case coherently. By denying himself cognitive access to conceptual distinctions like 'true/false' (*notitiam very . . . falisque*, 476) and 'certain/uncertain', the sceptic cannot claim to grasp the dependent notion of knowledge either; or, therefore, to understand the terms in which he formulates his own skepticism (473-7).
S2(b) The conception of 'true' in fact comes from the senses, which must themselves be irrefutable (478-99).
S3 A pragmatic argument: skepticism is unlivable in practice (500-21).

So let us start with the first task which is to examine whether this version of skepticism as presented by Lucretius can be related with the one developed and known in Epicurus' time. As Sedley claims, usually two versions of skepticism are recognized as possible in Lucretius' exposition, which he calls reflexive and non-reflexive skepticism.[55] The first, reflexive one, is identified as 'Socratic' skepticism and probably ascribed to Socrates by Arcesilaus[56], according to which "one claims to know that one knows nothing", while the second is usually associated with Metrodorus' version in which it is argued that "we literally know nothing". The reflexive version of skepticism also resembles later Pyrrho's radical version of skepticism, which denies any access to truth and falsehood, since everything is indeterminable and unknowable. After all, evidences imply that Epicurus is familiar and particularly interested in Pyrrho's position (IX.64). So there are at least three possible versions of skepticism, 'Socratic', Metrodoran and Pyrrhos', against which Lucretius is

[54] Sedley (1998), 88.
[55] Ib., 85.
[56] Evidence for this is found in Cicero's *Acad.* I.44-45.

arguing. Which of those versions, if any, then reflects Epicurus' understanding of the skeptical challenge?

In regards of the first skeptical version, namely 'Socratic' skepticism, the following reasons raises doubts for associating it with Epicurus. Namely, if it was formulated by Arcesilaus, as Long argues, then that version is clearly postdating Epicurus' writings which are Lucretius' source for the development of the self-refutation argument. Given this dating issue, it seems that 'Socratic' skepticism is not the target of Lucretius' self-refutation argument. Concerning Metrodoran skepticism, Bailey[57] and Burnyeat[58] claim that the person Lucretius has in mind as the target of Epicurus' attack is Metrodorus, because of the opening line of his book *On Nature*, where he says that "we know nothing, nor do we even know just this, that we know nothing", as reported by Sextus[59]. But Sedley questions this proposal by offering a different reading of Metrodorus based on Cicero's report from *Academica,* according to which Metrodorus said "I say that we do not know whether we know anything or not . . ." (II.73, transl. Sedley), from which Sedley concludes that this version "does not even appear to be fully skeptical, let alone vulnerable to the self-refutation argument"[60]. Therefore, the self-refutation argument obviously would not work here, and hence, Metrodoran version is rejected as skepticism against Lucretius counters. Finally, regarding Pyrrho's version, Sedley and Vander Waerdt agree on not taking Pyrrho to be a probable skeptical target, since Epicurus does not recognize him to be a skeptic in the first place. Vander Waerdt on this says the following:

> It is striking that no Epicurean texts ever refers to Pyrrho as a skeptic. Epicurus plainly admires his way of life and his tranquility (his apragmosyne, D.L. 9.62-60; cf. frr.551, 555 Us), but may not have attributed this to skepticism. It was Timon, after all, who established the tradition that Pyrrho was a skeptic, and his tradition did not win out entirely in antiquity, for Cicero knows of Pyrrho only as a moralist who, like Ariston of Chios, admits no distinctions of value between virtue and vice.[61]

Therefore, Sedley and Vander Waerdt claim that there is not enough evidence that the skepticism Epicurus and Lucretius countered against is Pyrrho's. Following this argumentation, it seems that all three possible versions of skepticism, 'Socratic' advocated by Arcesilaus, Metrodoran and Pyrrho's are not the one that could be connected with Epicurus' skepticism. So what kind of skepticism is in question after all? And finally, does Lucretius'

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[57] Bailey (1947), 1237-9.
[58] Burnyeat (1978).
[59] SE *M* VII.87-88.
[60] Sedley (1998), p. 86.
[61] Vander Waerdt (1989), 235.

argumentation then reflects the skeptical debate developed by later Epicureans or still we can provide evidence that it is directly derived form Epicurus' own writings?[62]

In answering the first question, I agree with Sedley that the version of Lucretius' skepticism cannot be associated with one particular person, and more importantly need not to be. Lucretius understanding of skepticism, as Sedley writes, assumes very generally "that the skeptic has not stated any position on whether he does or does not know the truth of his skeptical claim"[63]. And exactly this kind of skepticism, as "the simple unrefined denial that anything is known"[64] reflects Epicurus' own understanding of the challenge posed by the skeptical challenge that proceeds from Democritean epistemology. And as we are told from other already mentioned sources it is true that the atomists after Democritus, namely Metrodorus, Anaxarcus and Nausiphanes, actually drew some serious skeptical conclusions from the cases of the conflict in our appearances. They probably adopted some version of reductionism[65] claiming that sensible properties do not really exist in reality but have to be reduced to specific atomic configurations, the knowledge of the world thus becomes limited only to its basic constituents, atoms and void and by that developed the implications of Democritean challenge in their own way. However, it is more than plausible that Epicurus interpret his own version of skepticism that follows from Democritean epistemology and argues against it. Therefore, we can conclude, following Sedley that Epicurus' debate reflects his own understanding of Democritean skepticism in general, however without any explicit reference to someone in particular. And exactly that debate is presented in Lucretius' very general version of skepticism.

But when it come to the second question regarding a precise origin of Lucretius' self-refutation argument another problem reveals, namely the lack of textual support for the use of the self-refutation argument against skepticism in Epicurus' own writings. Possible solution for this worry, given by Burnyeat and Sedley, proposed to rely on a similarity between the self-refutation argument given by Lucretius against the skeptic and self-refutation argument used by Epicurus against determinist in *On Nature*. Given this, they claim that Lucretius is even in the refutation of skepticism strictly following Epicurus. Burnyeat assumes that there is enough support for the connection of Lucretius' arguments against skepticism with Epicurus

[62] This polemic is best presented in the discussion between Vander Waerdt (1989) and Sedley (1998). Vander Waerdt argues that the skeptical debate is postdating Epicurus, and more precisely that version of anti-skeptical arguments we find in Lucretius are at first advocated by Colotes. Against this view argues Sedley (1998) who claims that Lucretius' arguments are exactly derived from Epicurus' *On Nature*.
[63] Sedley (1998), 85.
[64] Ib., 86.
[65] Sedley (1989).

original position, first because the arguments in DRN IV.469-521 follow Diogenes' reports of the summary of Epicurean epistemology in passages DL X.31-32. However neither in the passages of Diogenes, nor in any other text on Epicurus' epistemology, is there any evidence that Epicurus uses the particular self-refutation or *peritrope* argument strictly against skepticism. Nevertheless, Burnyeat offers a second solution which lies in showing that there is an analogy with the self-refutation argument Epicurus evidently uses against determinism. He clarifies the solution in the following way:

> How, then, would Epicurus have expressed the idea of self-refutation? By the verb *perikato trepesthai*, which means precisely to turn oneself around and upside-down. Lucretius has simply spelled out the meaning of Epicurus' expression in a line-long image. [66]

The verb *perikato trepein*, Burnyeat continues, is found in Epicurus' book *On Nature* where Epicurus shows that determinism is a self-refuting position.[67] Burnyeat concludes that the fact that self-refutation is part of Epicurean vocabulary serves as the evidence that "Lucretius has simply spelled out the meaning of Epicurus' expression in a line-long image". However, still it is unclear how this can be connected with the use of this argument precisely against the skeptic in Epicurus' own writings. Burnyeat's solution seems to offer a good explanation of how Lucretius himself, and not Epicurus, develops an anti-skeptical argument based on an analogy with Epicurus' own refutation of determinism. However, still there remains a plausible assumption that the argument was used by Epicurus in some unsurvived parts of his work *On Nature*.

Sedley's position actually claims that the only source Lucretius had is Epicurus' work *On Nature*. Moreover he strongly claims that Lucretius was completely ignoring philosophical debate of his time labeling him as an Epicurean fundamentalist, who was completely and exclusively focused on writings of Epicurus' himself and three other important figures of Epicureanism, Metrodorus, Hemarchus and Polyaenus, known as 'the Great Men'.[68] Here he is relying on one important methodological characteristic of "the conventions of philosophical argumentation in antiquity, which generally did not allow the imputation of authority to anyone but the founder of one's school and his acknowledged authorities"[69]. Another point that Sedley makes is that the self-refutation argument becomes useless once the reflexivity problem, that is the problem whether skeptic claims to know that

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[66] Burnyeat (1978), 200.
[67] LS 20C, line 23.
[68] Sedley (1998), 62-91.
[69] Vander Waerdt (1989), 227.

he knows nothing, was opened, and actually was not used as a part of anti-skeptical strategy against Academic skeptics at the time when Lucretius wrote his book.[70] Sedley concludes his explanation saying that "there is therefore excellent reason to see Lucretius' anti-skeptical argument as one dating back to Epicurus, rather than as reflecting the debates of his own time".[71] In short, the arguments for ascribing to Epicurus invention of the self-refutation argument against skepticims are based first, on a philological and structural analogy between Epicurus' and Lucretius' *peritrope* arguments, and second on the Sedley's claim that Lucretius' specific source is Epicurus' *On Nature* where he actually develops peritrope argument against determinism.

However, the worry that remains is that we do not find in Epicurus' own writings self-refutation argument to challenge skepticism or any interest in detailed elaboration against skepticism, and additionally not any other ancient source besides Lucretius ascribe it Epicurus. This doubt raises Vander Waerdt saying the following:

> The parallels between *DRN* 4.469-521 and *On Nature* are not, in my opinion, close enough to sustain the claim that the refutation of the skeptic exactly parallels that of the ethical determinist; and we should not attribute to Epciurus himself an elaborate critique of skepticism merely on account of a verbal parallel that could just as well be explained in other ways. For instance, Lucretius' image could be based on the anti-skeptical arguments of one of Epicurus' followers, or it could be represent his own application of Epicurus' argument in On Nature to the case of the skeptic. In either case, there is no necessity to attribute Lucretius' entire argument at 469-521 to Epicurus himself. In fact, this argument may include attacks on varieties of skepticism not developed until Epicurus' death.[72]

In the quoted paragraph, the last sentence again invokes the problem of Lucretius' target. At first, it may seem that it is inconsistent with Sedley's view that Lucretius follows Epicurus in countering against very general version of atomic skepticism I endorse previously. But in fact, Vander Waerdt simply offers a broader explanation claiming that Lucretius' argument is aimed at different varieties of skepticism. This interpretation does not exclude Sedley's claim that Lucretius follows Epicurus, but just leaves open a very plausible reading that from Lucretius' very general discourse it is legitimate to infer that he also has in mind other versions of skepticism that exceeds and postdates Epicurus' original interest.

On the other hand, so far it becomes more than obvious that Epicurus needs to refute the skeptic in order to establish his thesis that all perceptions are true, and moreover that his epistemology is motivated with the skeptical challenge. But if we deny the ownership of the

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[70] For a detailed discussion see Burnyeat (1976), to which Sedley (1998) refers as well.
[71] Sedley (1998), 87.
[72] Vander Waerdt (1989), 241-2.

self-refutation argument to Epicurus, two questions remain. The first is the historical one, concerning the original author of the argument, and the second about an alternative explanation of Epicurus' answer to the challenge of skepticism? The answer to the historical question I shall leave aside, since it is not of a crucial importance for my purposes.[73] I can just add that it is very probable that the author of peritrope argument is Epicurus, as Burnyeat and Sedley argue, but nevertheless it is also possible that Lucretius mistakenly associate it with the present discussion about skepticism. But leaving aside these speculations, I will try to provide the answer why I think Epicurus does not actually use self-refutation for skepticism at this point.

One possible answer is given by Vander Waredt who simply claims that Epicurus does not need self-refutation argument in order to establish the thesis about perceptual infallibility, because atomist skepticism does not call for such an argument. Instead, as Vander Waerdt explains, "Epicurus is able to disarm atomist skepticism simply by revising the theory of perception".[74] I partially agree with Vander Waerdt, but I think that Epicurus aim is o establish the thesis about incorrigibility if perception prior to the atomistic theory and any revisions in the theory of perception. As I emphasized previously atomism is established on perceptual knowledge, and therefore it is necessary to ascertain in advance perception as a secure criterion of truth in order to save not only phenomenal knowledge, but knowledge of atoms and void.

From what have been said so far, it follows that Epicurus' aim to secure the possibility of knowledge is formulated as a reaction primarily to the problem of the unreliability of perception and the consequences of that position, such as epistemological skepticism that undermines atomism as well. And exactly this is Epicurus' central epistemological worry, namely the arguments such as *ou mallon* and the argument from conflicting appearances, such as those discussed by Democritus.[75] The argument tells us that the conflict in appearances suggests that we should be suspicious about perceptions, since we cannot be sure which of them are true and which are not. To use a more technical vocabulary of the Hellenistic epistemology, we do not have a secure standard or a criterion to decide between them and ascertain the truth. In the next step, the relativity of perception might be further pushed to a full blown skepticism, as in the case some atomists, who infer from the conflict between our

[73] I rely on Vander Waerdt (1989) who argues very convincingly in his article that the ownership belongs to Colotes.
[74] Vander Waerdt (1989), 239.
[75] *Ou mallon* arguments are also found in Nausiphanes, see DK 75 B4, DL IX.69.

appearances that the senses are fallible and consequently that knowledge about phenomenal properties is impossible.

Given this, it seems that the anti-skeptical strategy must start with the adequate solution for the cases that imply the unreliability of sense perceptions and that means that he has to block the argument from conflicting appearances. Because otherwise, the possibility to end up in skepticism and without any knowledge remains wide open. Additionally, in order to prove and defend atomistic theory Epicurus definitely needs to have a secure foundation and starting point and that can only be reliable and trustworthy sense perception. Therefore, he sees the solution to this problem in the adoption of a rather controversial claim that *all* perceptions must be true, or otherwise no knowledge is possible.[76] For Epicurus it seems to be a case of a clear 'all or nothing' dilemma: either *all* perceptions are true, or *nothing* is possible to know. What I propose is that the reconstruction of Epicurus' anti-skeptical arguments should not be based on Lucretius' report, but on Epicurus' own texts from *Kuriai Doxai* XXIII and XXIV, for which I take, strongly reflects Epicurus' anti-skeptical motivation. Taking this as a starting assumption, his anti-skeptical strategy may be reconstructed in the following way.

In the reconstruction of Epicurus' strategy I will rely on Everson's understanding of Epicurus' argument for the incorrigibility of perception. Although Everson argues against the idea that overall Epicurus' epistemology is oriented against skepticism, his initial elaboration helps me to express my point. Everson claims that Epicurus' argument for the truthfulness of all perceptions can be reconstructed as a reductio of the following form "if the consequence of denying that all perceptions are true is that knowledge is made impossible then, since knowledge obviously is possible, all perceptions must be (treated as if they are) true"[77]. Epicurus worry is to secure the possibility of knowledge but not by showing that skepticism is a self-refuting position, but because it is obvious that there is knowledge. Therefore, Epicurus has to explain and prove two things in order for the reductio to work and to refute skepticism: first, that knowledge is possible and second, that it is not possible to treat some perceptions as true and some as false, but instead that the only option is to treat them all as being true in order to have knowledge.

I believe that here we find the reason why Epicurus does not employ specific anti-skeptical arguments, such as the self-refutation argument; the reason is simply that he takes it as *obvious* that we have knowledge of the world. From this then it immediately follows that

[76] And this is the formulation we find in *KD* XXIII, XXIV.
[77] Everson (1990), 170.

skepticism is rejected. However it needs to be elaborated to what this obviousness amounts to. It seems that Epicurus is here driven by already indicated commonsense understanding of the possibility of acquiring knowledge. It seems so intuitive that we have access to the world, that we discover and know the things in the world. Therefore, it is absurd to suppose that there is no knowledge. I take it that this is the starting point of Epicurus' reply to the challenge of atomist skepticism that leads him towards the thesis that all perceptions are true. Once this is settled as a starting point it becomes clear why Epicurus is not interested in the detailed and technical anti-skeptical strategy that we find in Lucretius. Simply, the idea that we have knowledge is so natural and obvious and further discussion about skepticism seems to be needless. Yet, the obviousness of knowledge is supported by another fact.

Namely, the reason for taking the idea that we have knowledge to be part of our natural instinct appears to be grounded on the intuitive idea according to which the kind of the source of knowledge primarily we think of is perception. Therefore, the task is to explain what is specific about perception that it guarantees knowledge. In *Letter to Herodotus* Epicurus specifies the idea of obtaining knowledge through perception by saying,

> For the existence of bodies is everywhere attested (*marturei*) by the sense itself, and it is upon sensation that reason must rely when it attempts to infer the unknown (*adela*) from the known. (DL X.40)

This passage illustrates several important points. Let us start with the most important one that underlies Epicurean epistemology and brings us to the core idea that perceptions play the main role in it. The passage expresses the strong and intuitive idea that we have knowledge of the existence of bodies in the external world and that the source of such knowledge is obviously perception. Bailey excellently points out that Epicurus, obviously contrary to all the skeptical inclinations of his time, "made an emphatic return to the view of common sense"[78] and proposes perceptions as the most natural cognitive method and the primary source of the knowledge. Epicurus' starting point is the ordinary idea that gaining knowledge inseparably and naturally goes along with another commonsense intuition, that knowledge primarily comes through the senses, and moreover that perception in fact is already knowledge. Here comes another important point regarding the way perception discovers that there are bodies around us. In order to characterize the way perception works Epicurus uses the verb *marturein*, which we can translate as 'to report' or 'to witness'. In other word, perceptions put us in relation with the external world as its witnesses. And this brings us to Taylor's idea of

[78] Bailey (1928), 237.

the ‘forensic analogy’ according to which perceptions play a specific role in Epicurean epistemology because of a distinctive characteristic: perceptions directly witness the things in the world and therefore have an evidential role as reliable witnesses.[79]

So it is common sense which suggests that the natural starting point for obtaining knowledge about the things in the world is reliance on perceptions as the primary cognitive tool that tell as what the world, that is, give us a picture of the world in accordance with naïve realism. And this commonsense intuition relies on a specific characteristic perceptions seem to have, namely that they put us in a direct relation with the external world. Furthermore, common sense takes these immediate perceptual reports as truly representing the world as it is and therefore perception arises as a primary source of knowledge. And notice what follows from this line of thought: if perception puts us in a direct epistemic connection with the world, in such a way that it we take it that it truly reports the world as it is, we intuitively accept that perceptions are true in so far as we naturally accept that the objects in reality are as presented in perceptions. In other words, we take them to be self-evidently true. So it appears that the idea about the infallibility of perception is grounded in the commonsense understanding of perception as a cognitive method that puts us in a direct relation with the external world.

It seems that the acceptance of the truthfulness of perception intuitively goes along with the commonsense assertion that perception is the most basic and reliable cognitive method. If we turn back to the *KD* XXIII, I already said that it seems that the thesis implies an obvious and exclusive connection between obtaining knowledge on the one side and perception as a reliable and self-evident method for that epistemic goal on the other. The commonsense assumption provides us with the initial explanation for the connection. Moreover, I take it that is also serves as the reason why Epicurus does not need specific arguments against skepticism. He is motivated by the commonsense assumption that there is knowledge and the commonsense assumption by itself rejects skepticism. It rejects it on the grounds that skepticism appears to be an absurd position given the obviousness of knowledge.

Also it is important to stress again that skepticism here is rejected independently from the atomistic theory, showing that Epicurus’ strategy against atomist skepticism assumes that the reliability of sense reports must be secured in advance, but also that Epicurus does not need to apply any advanced anti-skeptical strategy, such as self-refutation argument. However, the rejection of skepticism does not rely on a mere stipulation that there is

[79] Taylor (1980), 109.

knowledge.[80] What justifies this initial assumption is another intuitive idea, namely that the reliable cognitive method for acquiring knowledge is perception, but it is so because of its specific evidential character. Therefore, the first part of a reductio is supported by commonsense assumptions about the possibility and nature of knowledge that primarily is attained through perception.

However, the common sense assumption appears to be inappropriate for the justification of Epicurus' thesis that *all* perceptions must be true. Indeed, the thesis that some perceptions are true and some false is also perfectly compatible with a common sense, even more than the one about perceptual incorrigibility. It might be rightly objected that Epicurus is now making an odd step in which he radically and surprisingly moves away from the initial commonsense assumption that perception is a primary source of our relation to the world, to an unnatural position claiming that all perceptions are true. The position is unnatural because it seems more than obvious and in accordance with common sense to claim that sometimes perception does not truly report the world as it is. So the question now is whether Epicurus abandons the initial commonsense assumption? And if he does, what is then Epicurus' motivation for the controversial thesis that *all* perceptions are true? Or to put it differently, why does he think that knowledge is possible only if all perceptions are true?

My attempt is to show now that the reason for taking all perceptions as being true is completely grounded in commonsense explanation of perception. Epicurus is not abandoning his commonsense intuition, but rather we can say that he is sharpening his intuition that the primary source of knowledge is perception. His overall strategy aims to secure first, the connection between perception and knowledge of the world as the ultimate and the most primitive cognitive relation and also to give a reply to the major challenge for obtaining knowledge, namely the argument from conflicting appearances. Commonsense assumption provides us with a good reason to privilege perception as a source for obtaining knowledge, since the thesis that relying on our natural cognitive faculties, i.e. perceptions, will reveal the truth about the world seems more than plausible. However, the task now becomes rather odd requiring an explanation of the way in which a total infallibility of perception fits the common sense assumption.

The explanation for the adoption of this stronger thesis that all perceptions are true is connected with Taylor's 'forensic analogy'. The 'forensic analogy', as Taylor points,

[80] Asmis (2009) claims differently that Epicurus does not offer a proof that the perception are reliable guide, but that he merely *demand* that we use perception as a basis of judgment. But she also observes that "otherwise the investigation cannot proceed". I take it that this suggests that in fact Epicurus' reasoning is not a mere demand, but that developed argument stands behind this.

"depends on the *basic* character of the evidence of *aistheseis*".[81] I believe that deeper analysis of the basic character of perception will elucidate Epicurus' assertion that all perceptions ultimately report the truth. Just to remind us, 'the forensic analogy' put forward the idea that perceptions have an evidential role since they accurately report or witness a state of affairs as they are in reality. So, what is the basic character of perception? Important evidence is given by Diogenes in the following passage:

> All sensation, he [Epicurus] says is irrational (*alogos*) and does not accommodate memory. For neither it is moved by itself, nor when moved by something else is it able to add or subtract anything. (DL X.31, transl. LS 16B)

Diogenes introduces these characteristics of perception immediately after giving the list of Epicurus' criteria, as Taylor notices[82], but I believe that this point is of important relevance for our present purposes. Namely, at this point we are trying to elucidate the reasons for taking perceptions as if they *all* truly report reality. In the quoted passage Diogenes, immediately after introducing the list of criteria puts forward these characteristics that are common to all perceptions and which also reflect something peculiar about their nature because of which Epicurus takes them to be the first criterion of truth. The first sentence tells us that the one of the characteristics of perceptions is that they are irrational, as *alogos* is usually translated, and next that it is not capable of memory. The reason for these particular characterizations of perception lies in the next sentence. Namely, first, perceptions cannot be self-creative or self-moved since they are always moved by something else and next, that when moved, perceptions are incapable to intervene in the report they bring. The second clarification of these characteristics we find in Sextus' report where he says:

> He adds that sense-perception, being capable of grasping the things that impinge on it, and neither taking away nor adding nor changing anything (since it is non-rational), continually tells the truth and grasps the thing that is, in the way in which that very thing is in its nature. (SE *M* VIII.9, transl. Bett)

So Sextus' explanation goes in the same line as Diogenes', claiming that perceptions are irrational because they do nor add or subtract anything to the report they carry. But Sextus adds another important point that the report perception carries is always a grasp of the object in the external world, and moreover that the report is always in accordance with the true nature of the object.

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[81] Taylor (1980), 110.
[82] Ib., 112.

The reports from Diogenes and Sextus offer the following reading of the characteristics of perceptions. Namely, perceptions are *alogos* because they are, as Diogenes reports, not self-generated; they are always caused by something from the outside. Given this, we can say that perceptions are passive, since they originate only when stimulated by external causes. Furthermore, Diogenes says that perceptions do not accommodate memory, which in fact probably means that perceptions are not capable of storing their reports somewhere since they are just passive responses to the external causes and therefore they do not involve memory, which would require some sort of judgment, comparison or other cognitive processing of the original reports. From this it follows that perceptions in general are not capable of exercising any higher order cognitive process about what is presented to us, or as Diogenes and Sextus report, perceptions are not capable of adding or subtracting anything to the given report. Passivity is the first important characteristic and the basis for further conclusion that perceptions cannot add or subtract anything in the report they present since they just passively present the things acting upon our sense-organs, and therefore. And from this follows another crucial characteristic of perception, namely, that given its passivity, perception thus "constantly reports truly and grasps the existing object as it really is by nature", as Sextus reports. In other words, perceptions are always true, since they passively register the things which act upon our sense organs, being just mere 'bodily happenings'[83] as Rist calls them, and therefore accurately depict them as they are. Therefore, this model of perception excludes the possibility of assessment or processing by perception itself, thus leaving no room for any error. This in the end guarantees their infallibility.[84] It seems that here Epicurus argues on the following lines.

And this brings us again to the 'forensic analogy'. Namely, as Taylor points, we can ascribe this unique characteristic of perceptions as witnesses because their reports accurately represent the external impact and "the accuracy of the reports is guaranteed by the fact that *aisthesis* is *alogos*". Everson embraces Taylor's view and claim that the quoted passages from Diogenes and Sextus elucidate the evidential character of perception. According to Everson "the truth of perception will be guaranteed by the processes which bring it about" and continue by saying that "given the total passivity of the senses, what the perception is like

[83] Rist (1972), 20.

[84] These characteristics of perceptions will be further explained and justifed in the light of the atomistic theory. However, even at this point, it seems to me, common sense suggests this picture of our perceptual system in which our senses are receptive and passively opened to the world. The idea is in Burnyeat (1979) labeled as the 'window model' which indicates transparency of perecption and openeness to the world.

must be determined by the nature of what brings it about".[85] Given that perceptions, being always caused by something external and not capable of processing and assessment, we can conclude that the main characteristic of their nature is a passive response to the external stimulus and a direct presentation of their external cause. This special nature guarantees that the report they give is accurate and reliable. Therefore, perceptions are true. So, how does this claim fit commonsense assumptions? I think it does because of the following. First, the fact that perception is a passive response is something that perfectly goes along with common sense. We naturally think of perception as something that put us in a causal connection with the world in such a way that the world causally affects our sense organs. Therefore, the characteristics Epicurus ascribes to perceptions, namely passivity in response to the external stimulus and mere registration of the external things as it is in reality is completely compatible with the commonsense assumptions. Indeed, it appears overwhelmingly probable that Epicurus' method by which he formulates the thesis that all perceptions are true at this point simply follows commonsensical intuitions according to which for a perception to occur it is necessary to be caused by an object.

But still there is an open question: are they all true? To put it differently, Epicurus still has to reject seemingly the most plausible position according to which some perceptions are true, and some are false. Diogenes continues previously quoted passage saying the following:

> Nor does there exist that which can refute the sensations: neither can like sense refute like, because of their equal validity; nor unlike unlike since they are not discriminatory of the same things; nor can reason, since all reason depends on the senses; nor can one individual sensation refute another, since they all command our attention. (DL X.32, transl. LS 16B)

Here we find four arguments attempting to show that it is not possible to refute sensation. The first one appeals to the equal validity of perceptions coming from the same perceptual modality, which implies that it is not possible for the perceptions to refute each other. The second argument shows that it is not possible for the perceptions coming from different perceptual modalities to refute between themselves, since they do not report the same thing. The third point the supremacy of the perception over reason, and thus excludes the possibility that perceptions might be refuted by reason. And finally, the fourth argument indicates that one single perception of some object cannot refute another of the same object, again because

[85] However, my understanding of the 'forensic analogy' is somewhat different from the original Taylor's view. In his case the evidential character of perceptions is grounded and justified only from the eidolic theory of vision, while I suggest that at this at this level Epicurus is relying purely on commonsense assumption. In the next step perception are justifed by atomistic theory.

of the same validity. Three of them in fact are concerned with the equality and incommensurability of perceptions and one of them with the impossibility of reason to refute perceptions. I propose to closely analyze them in that order.

The equality of perceptions covers the first and the fourth argument and implies that it is not possible to refute perceptions in any case within the same perceptual modality. This is the cases such as the one in which the same thing, the honey, appears sweet to one person, but bitter to another. Namely, perceptions are equivalent regarding the report of the external cause they present and therefore it is not possible to decide between them. For the cases of the quarrel between the different modalities, such as vision and touch in the case of a stick that looks bent in the water, it is not possible to decide between them since they are in charge of different objects, such as colors and shapes in this case.[86] In other words, as Long and Sedley point, perceptions are "incommensurable, since each reports different type of object".[87]

The same explanation we find in Lucretius' text, where he writes:

> Will the ear be able to convict the eye, or the touch ear? Will the taste of the mouth again refute the touch, will nose confound it, or eye disprove it? Not so, I think. […] For the taste of the mouth has power on a separate sense, smell arises for a separate sense, sound for another. Therefore it is necessary that one sense cannot refute another. Nor furthermore will they be able to convict themselves, since equal credit must always be allowed to them. (Lucretius, *DRN* IV.486-496, transl. LS 16A)

Therefore, from the fact that one perception reports that X is F, and another that X is not F, Epicurus first concludes that we do not have reason to refute any of them, or better to say we cannot determine that one of them is true and the other false. The forensic analogy shows that perceptions have specific nature, namely the evidential character according to which all perceptions accurately report the things as they are. If this is so, than one perception cannot refute another one due to the fact that they all carry the same evidential power. This point, as Striker rightly notices, Epicurus shares with the skeptics.[88] The whole later skeptical tradition relies on the fact that due to the equality of perceptual reports (*isosthenia*) it is not possible to resolve the conflict between them and to ascertain which one of them is true,

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[86] We shall come back to this discussion and elaborate more the issue of the objects of perception after the atomistic theory is introduced. At this point, argumentation is still independent of the atomistic theory.

[87] LS, 84.

[88] Striker (1996), 87. Everson (1990) claims the following: "Now obviously this argument [from conflicting appearances] can be used in either of two ways: to establish sceptical conslusion, or to infer Epicurus' thesis, that all sense impressions are true. The Sceptics, as is well known, used the argument from contary sense impressions to show that they cannot all be true, and that therefore, knowledge is impossible. Epicurus on the other hand wanted to maintain that knowledge was possible, and thus found himslef saddled with the thesis that all sense impressions are true." (153). Sedley (1987) accepts this idea.

which false.[89] But the skeptical inclinations that go back to Democritus, as we have seen, also proceed from the perceptual conflict and Epicurus is aware of this problem as we have already seen.

But Epicurus offers an unexpected solution to the skeptical challenge. Following Striker's point[90], we can say that the argument from conflicting appearance in the first, epistemically neutral level, just determine that we cannot resolve the conflict between perceptions because of their equality. However, the next step is epistemically restrictive one which claims that knowledge is possible if and only if all perceptions are true. And in that next step the skeptics conclude that, given the perceptual conflict is irresolvable, there is no possibility to ascertain true perceptions which are necessary for knowledge, and consequently infers that knowledge becomes impossible. Epicurus agrees that the conflict is irresolvable in terms of choosing one of the conflicting perceptions as the true one, because of their equality. However, unlike the skeptics, Epicurus from this does not infer that we should discredit perceptions in total, but just the contrary: since there is knowledge, and knowledge is perception, we should accept them and trust them *all* as equally accurate reports of the external stimulus, just as Lucretius concludes in the previously quoted passage, "what has seemed to these at any given time to be true, is true". (Lucretius, *DRN* IV.497-9)

Another important point should be emphasized. It seems to me that the idea of equality of perceptions strongly relies on the forensic analogy, namely on the idea that perceptions in general share their specific, evidential nature. This is important because I want to claim that Epicurus establish the claim about perceptual infallibility on the basis of commonsense assumptions. At this point, in which we are trying to explain the rather controversial claim that perceptual conflict cannot be resolved it might appear that the discussion becomes severely separated from common sense. Therefore, it is necessary to have in mind that the starting point for the rejection of the possibility of discriminating between true and false perception originates from the forensic analogy, which I claim to be compatible with commonsense assumption and prior to atomistic theory.

The second point is that the argument about the impossibility of refutations of perceptions deals with the contribution of reason. Namely, Epicurus examines the possibility that there is some other standard by which we can judge perceptions and decide the conflict between them. If that standard cannot be perception itself for the reasons just explained, the only other possibility is reason. But Epicurus here adopts the idea common to all atomists,

[89] Cf. SE *PH* I.8, 10, 189, 196, 200; II.103, 130
[90] Striker (1996), 86-7.

namely that the primary source for all knowledge is perception and that reason relies on perceptual reports. Striker, for examples, takes it for granted that empiricism is strongly implemented and common to all Hellenistic schools.[91] However, it seems to me that Epicurus does not take it for granted but the acceptance of the dominance of perception lies in the commonsense intuition regarding perception as the primary source of knowledge and also in the initial explanation of knowledge as basically obvious. This is indicated in the previously quoted passage from Diogenus, DL X.39-40, which elucidates Epicurean empiricism. There it becomes clear that the thesis about perceptual incorrigibility is central part of his empiricism. The obviousness of knowledge there is equated with perception which directly tells us that bodies exist and also that they move.

Additionally the same passage also explicates the way perceptual authority extends over reason. In the passage Epicurus starts from the fact that we can see or touch bodies. From this the inference that there is void runs as follows: sense perception shows us that bodies exist and also that they move. Given this, it necessary follows that there must be void since if there were no void bodies could not move. Unless there were void the whole world would be solid mass and without motion. But this is directly opposed to the evidence from sense perception and for Epicurus must be false. This is how Epicurus infers that the second constituent of the nature is necessarily void. So the proof of the existence of a non-evident thing, void, has the following form:

(1) If there were no void it would not be possible for bodies to move.

(2) Perception tells us that there are bodies and that they are in motion.

(3) Therefore, there is void.

Epicurus concludes that although perception does not directly testifies about the existence of void, nevertheless reason would be completely incapable of reaching that conclusion without the attestation of the senses. Reason is thus completely dependent upon perception and therefore cannot either refute perception or, more importantly, serve as the criterion of truth. In this example we have just seen the way perception serve as the criterion of truth. Similarly, on the predominance of perception over reason in the context of the inquiry about the fundamental criterion of truth, Lucretius writes the following:

> …from where does he get his knowledge of what knowing and not knowing are? What created his preconception of true and false? And what proved to him that doubtful differs from certain? You will find that the preconception of true has its origin in the senses, and that the senses cannot be refuted. For something of greater reliability must be found, something possessing the intrinsic power to convict

[91] Striker (1996), 153.

falsehoods with truths. Well, what should be considered to have greater reliability than the senses? Will reason have the power to contradict them, if it is itself the product of false sensation? For reason is in its entirety the product of the senses, so that if the senses are not true all reason becomes false as well. (Lucretius, *DRN* IV.478-485, transl. LS 16A)

Reason becomes subordinate in the sense that it receives all information from perceptions. The rejection of the reason as the primary source of knowledge again is rooted in the commonsense assumption which singles out perception as the ultimate source of direct and accurate knowledge of the world. By this Epicurus has eliminated any possibility that there is some other possible criterion by which perceptions can be shown to be false, and therefore rejected thesis that some perceptions are false and some true. The thesis that all perceptions are true is finally established as "the first and fundamental principle of the Canonice".[92]

In the end, let me briefly recap the main arguments of the chapter. I wanted to argue that in Epicurus' work it is possible to reconstruct a priori arguments that led him to the thesis that all perceptions are true. These arguments, as I suggest, shows that he was motivated by the challenge of the version of Democritean skepticism and the argument about unreliability of percepion. Therefore, Epicurus recognizes that in order to block the skeptics he needs to secure a firm starting point for any further investigation and thus introduces the problem of the criterion of truth necessary for ascertaining knowledge into epistemological debate in Hellenistic philosophy. This is reflected in his claims that by rejecting perception we are rejecting any standard for judging. So in order to avoid impossibility of knowledge it is necessary to establish a firm starting point. Such a foundation must be immune to any further epistemological investigations.

I proposed that Epicurus grounded his starting point for his investigation in the commonsense assumption, by which he emphasized the obviousness of knowledge and rejects skepticism in the first place. The commonsense assumption I regarded as similar to the picture of the world in accordance with naïve realism. I belive that this fairly reflects Epicurus' intention since his aim is to secure the phenomenal knowledge of the world. In the next step, commonsense intuition revealed important facts about the nature of perceptions and established them as the secure and reliable cognitive tool. The final strategical move that brought him to the thesis about the infallibility of all perceptions was based first on the arguments that each perception is of equal validity and therefore perceptions cannot refute one another, and second that neither reason can refute perceptions since the validity of reason itself, as all atomist claimed, is derived from the senses. So in order to defend the possibility

[92] Bailey (1928), 241.

of knowledge, Epicurus chooses rather peculiar position about the perceptual incorrigibility which establishes him as one of the most radical empiricist in the history of philosophy. These arguments revealed, as I claimed, the motivation for the thesis that was independent from the atomic theory. Now we have to see how the second line of argumentation for the incorrigibility of perception based on the atomistic theory.

2.2. The external mechanism of perception

So far Epicurus offers us the motivational reasons to treat sense-perceptions as the criterion of truth and a starting point for gaining any knowledge and thereby he obviously commits himself to some version of empiricism. He starts off from the natural trust in the senses as the only way by which it is possible to attain knowledge and to get engaged in any scientific investigation of the reality, since it is necessary to have a reliable starting point. However, his empiricism relies on the peculiar thesis about the equal cognitive status of our perceptions, which are established as the standard which needs to be accepted if any further judging is to be made. And now we the further judging runs: we are going to be told what the mechanism of perception is. The mechanism is provided by the atomistic theory. Exactly this way of reasoning is supported by Cicero's *On ends*, where an advocate of Epicureanism, Torquatus, explains Epicurus' strategy as follows:

> Besides, it is only by firmly grasping a well-established scientific system, observing the Rule or Canon that has fallen as it were from heaven so that all men may know it – only by making that Canon the test of all our judgments, that we can hope always to stand fast in our belief, unshaken by the eloquence of any men. On the other hand, without full understanding of the world of nature it is impossible to maintain the truth of our sense-perceptions. (Cicero, *De Fin*. I.63-4, transl. Rackham)

Torquatus sets forth two important parts of Epicurus' methodology that I am trying to isolate. The first deals with the criterion of truth which must be accepted in advance in order to make any scientific discovery. Just a few lines later on in the same text, Torquatus uses the version of Epicurus' argument from *KD* XXIII, implying that unless all perceptions are true, no certain knowledge will be possible. I take it that his description of the criterion "as it were from heaven, so that all men may know it" should imply that we do not need any particular argument for the reliability of the senses, because this is obvious to everybody. So the first point indicates the commonsense assumption.

Nevertheless, Torquatus reveals another important point. Namely, he says that Epicurus realizes that it is necessary to show that perceptions are in accordance with the true nature of the world in order to justify the claim of perceptual infallibility. This implies that the acceptance of the thesis that all perceptions are true requires deeper analysis of the nature of perception and the way our senses are connected with the world. In other words Epicurus has to offer a precise analysis of the way perceptions occur and to explain why is it that they always match reality. At this point Epicurus' epistemology becomes tightly connected with his metaphysical and scientific explanation of the nature of the external world and its basic constituents. Therefore, it is crucial for Epicurus in the next methodological step to defend the true nature of perception that is to carefully examine what exactly it means to say that perception is infallible because it is passive and *alogos* as the previous argumentation shows. This will also show how apparent perceptual conflict is not inconsistent with the claim that all perceptions are true. In order to do that he turns to the account of the physical process of perceiving which he takes to be grounded in the atomistic theory.

At exactly this point Epicurus' strategy faces a serious tension problem that implies serious inconsistency within his proposed methodological framework. Namely, Epicurus is trying to square the commonsense assumption about our natural inclination to accept perception as the most natural cognitive method for acquiring knowledge of the external world with atomism, according to which the world consists only of atoms and void. Moreover, Epicurus wants to make another seemingly impossible step and that is to show that atomism is in fact supported by sense-perception. Irwin offers a very clear formulation of this highly counterintuitive and problematic strategy, also including the main postulates of atomism, saying the following:

> Atomism tells us that (a1) the atoms are in constant motion, and (a2) they lack colour. The senses, however, tell us (b1) there are stable bodies not in constant motion, and (b2) bodies are coloured. The evidence of the senses, then, seems to conflict with atomism, because we cannot understand how (c1) apparently stable bodies are simply collections of moving constituents, or how (c2) apparently coloured bodies are simply collections of colourless constituents.[93]

This is already mentioned and discussed problem that originated from Democritus opens the well-known philosophical problem of the gap between appearance and reality. The problem is particularly relevant if the atomistic explanation of reality is adopted, since the discrepancy between the world of appearance and the world according to atomism seems to

[93] Irwin (1989), 152.

be radical. The possible solutions of this epistemological problem seem to require us to give up on one or other of the pictures of the world; to adopt either something we can call pure sensationalism and to stick with the idea that the world is as it appears to us, or to adopt atomism and claim that objective reality consists only of atoms and void. However, Epicurus chooses a third way and aims to reconcile these views in order to justify the theses (c1) and (c2) from Irwin's quotation.

We can easily reconstruct this justificatory strategy from the *Letter to Herodotus* and the steps are the following. Epicurus there claims that in any investigation of nature we have to observe everything in accordance with our sense-perceptions as the criterion (DL X.38).[94] Since the claim for taking sense-perceptions as a secure starting point is proved as a part of his commonsense assumption, Epicurus then continues to the first argument which attempts to show the exact way in which the senses provide us with the evidence for the atomistic theory, namely the argument for the existence of void and bodies (DL X.39-40). After atomism is established, Epicurus is obliged to explain all objects, states of affairs and other phenomena in terms of the atomistic theory and therefore he proceeds to analyze the physical process of perception and the thesis of perceptual incorrigibility on the basis of the atomistic theory.

Epicurus opens the explanation of the process with the mechanism of vision, which is taken as a paradigm case of perception and discussed in much more detail than the other perceptual modalities. This is due to the fact that vision is taken to be the most informative sense through which the largest amount of data about the external world is gained. In other words, a vision presents a general framework of how perception works so that the other senses then followed the pattern given by this framework. Nevertheless, Epicurus offers an analysis of the senses of hearing and smell as well, while in Lucretius we find analysis of all five senses.

Before we proceed to the examination of the perceptual mechanism, let me just briefly summarize some important theses of the atomistic theory, which are relevant for the physical analysis of perception. According to atomism there are two basic constituents of the world: void and atoms, and everything that exists in the world can be reduced to these fundamental elements. The main characteristics of the void are that it is not tangible and does not manifest

[94] In the previous chapter it is argued that perceptions are established as the criterion by virtue of a priori arguments, in order to avoid that the argumentation ends up being circular. Given that, it cannot be objected to Epicurus that he is using the atomistic theory to justify the nature of the perceptual process and accuracy.

resistance. Because of these characteristics the main function of the void is that it makes it possible for the solid objects to be at some place and also allows their movement.[95]

Atoms on the other hand are solid objects containing no void and because of that they are indivisible and also changeless. Since they are the smallest corporeal entities they must have some other characteristics inherent to physical bodies, namely, shape, weight and size.[96] But besides these three qualities atoms do not share any other quality which other bodies possess. Therefore they are not colored, do not have smell, heat or sound[97]. These secondary qualities belong to the objects at the macroscopic level which are built up of atoms. The process of building up macro-objects is explained by means of another important characteristic of atoms. Namely, atoms are constantly moving through the void, never being at rest. There are two causes of their constant motion: (i) atom's weight which causes an atom to move downward which is inherent to the atom by its constitution, or (ii) collision with some other atom or atoms which is impact from the outside.[98] So during the motion atoms can move freely because in the void there is nothing that can halt them unless they collide with other atoms. In the collision it is possible for them to either change their direction or to hook on to an other atom. The latter possibility has as a result the formation of atomic compounds which, if large enough to be perceptible, are in fact objects at the macroscopic level.

The movement of atoms is particularly important for the process of perceiving. Namely, given the fact that atoms are in constant motion Epicurus infers that macroscopic bodies are constantly emitting atoms and next he asserts that specific sorts of emanations are responsible for the perceiving of objects. The process of perceiving occurs because appropriate emanations, i.e. streams of atoms, are impinging upon our sense organs producing in that way appearances of objects. These atomic outflows are specific to each sense organ so that every sense organ is receiving the appropriate sort of emanation. Those sorts of emanation then cause five types of sensory sensations. This is the general framework of Epicurus' well-known theory of effluences according to which the activity of the senses is explained through a contact of the sense organ and an external stimulus impinging on it. Although Epicurus takes vision as the most important sensory modality, he nevertheless mentions others. In the Letter to Herodotus he discusses the process of hearing and smelling,

[95] This Epicurus' view on void is rather controversial, and something that, for example Aristotle would not accept. Simply, if there were no void, it does not follow that the things composing the physical phenomena would not have a place. However, as David Sedley (1999), argues, it just seems that Epicurus did not make a distinction between place and void.
[96] DL X.54.
[97] Lucretius, *DRN* II.730-833.
[98] DL X.61.

but detailed analysis of all five modalities we find in Lucretius. However, as we shall see Epicurus also takes that the mind function as the sixth sense organ, that is, on the basis organ-stimulus pattern, but also have other functions, namely, reasoning and inferential processes. Therefore, Epicurus applies the same explanation of the mechanism of perceiving for certain cases of 'mental vision' such as dreams, hallucinations and illusions.

2.2.1. Visual perception

The process of visual perception is obtained through the films of atoms called images (*eidola*) which are released from the surface of objects due to the constant internal motions of atoms within objects. The theory is introduced in paragraph 46 of *Letter to Herodotus* where Epicurus before proposing the technical term, *eidolon*, refers to the images using the term 'outline' (*tupoi*). Paragraphs DL X.46-7 bring information about the movement of *eidola*, the way they are emanated and also about their main characteristics, while paragraph 48 tells us something about the formation of *eidola*. Let us closely examine those passages.

In the opening sentence of paragraph 46 we are told that *eidola* are similar to the solid objects from which they are coming retaining the exactly the same position and the pattern of atomic configuration as in the object and thus representing the object's shape.[99] This introductory characteristic is of an essential importance and will be further elucidated, but it presents the key element of the whole theory of effluences and the grounds for the thesis of the truthfulness of perceptions. However the crucial task now is to offer the reasons for the acceptance of the existence of *eidola* and also to explain what makes the similarity between the *eidola* and the object possible. Epicurus in the *Letter* states that the existence of *eidola* is possible, because "it is not impossible that such emanations should arise in the space around us, or appropriate conditions for the production of their concavity and fineness of texture, or effluences preserving the same sequential arrangement and the same pattern of motion as they had in the solid bodies". (DL X.46, transl. LS)

Although Epicurus does not further prove the existence of *eidola*, more developed discussion, supported by some vivid arguments, is found in Lucretius. Lucretius states that "amongst visible things many throw off bodies" (Lucretius, *DRN* IV.54-5) pointing to the examples first of inanimate things like smoke and heat being emitted from burning wood and

[99] This is one of the cases in which vision is caused by some external object, such as a tree or house. Later on we shall discuss other examples of vision, namely dreams, illusions and hallucinations, and also the cases of various visualizations. However, in all of these cases Epicurus preserves the idea that the vision is always caused by something external, namely *eidola*. The only difference will appear in the explanation of the formation of *eidola*.

second to examples among animals, like crickets and snakes which cast off their skins. Then he passes to the examples which are more in accordance with the core idea of the function of *eidola,* starting with the case of color, as being emanated from the surface of objects and finally concludes with the most persuasive example of a mirror which exactly reflects the images of objects and so "must consist of images thrown off from those things". (Lucretius, *DRN* IV.101) In fact, it appears that Lucretius in the sequence of the selected examples moves from the analogies with the observable to an actual instance of *eidola*. Lucretius concludes that there is nothing strange about the general idea of emanation, given that we can *see* that many objects in the world throw off certain things.[100] His inference is based on the usual Epicurean practice in scientific methodology of adducing a straightforward analogy from the observable to the atomic level that the same emanations are perfectly possible to exist on the invisible level. Only the last example of the mirror reflection is not a pure analogical one, since here we find an actual instance of the emanation of images, as Lucretius' text suggests. Namely, the mirrors are reflecting "thin shapes and like semblances of things, which singly no one can perceive, yet being flung back by incessant and unremitting repulsion give back a vision from the surface of the mirror". (Lucretius, *DRN* IV.104-7, transl. Smith) Therefore, vision is the result of flows of *eidola*, coming from the surface of objects in such a way that they retain the exact atomic arrangement of the object they are flowing from.

Next, in paragraph 47 of the *Letter*, Epicurus introduces characteristics of the images, namely that they are much finer than the atoms in the solid objects and that they travel with an enormous speed. With regard to the structure of the images Epicurus does not argue for their fineness, but appeal to the method of testing theoretical inferences according to which the opinions about non-evident things are true if not in conflict with sensory experience (*ouk antimarturesis*) and concludes that their specific, very fine texture is not refuted by sense-perception, that is by anything evident (*enarges*). However, both of the characteristics are supposed to explain the key part of the theory of vision, namely the similarity between the images and the object from which they are thrown off. How does Epicurus accomplish this task?

Due to the fineness of their texture *eidola* are able to move very easily, also to penetrate and passing through some objects, such as windows and other transparent objects, with almost no collisions on their way with other atoms. Given that they suffer almost of no distortion and alteration of their internal structure and the pattern of the atoms they accurately

[100] Here we see the way perception serves as the sign of what is non-evident. This is part of normal Epicurean method of testing beliefs, as we shall see in the last chapter.

match the solid object and its atomic arrangement. The motion of the images is more important because it explains some significant facts about the way vision occurs. Namely, it is said in the passage (46) that *eidola* move very rapidly, so that they are able to "accomplish every comprehended length in an incomprehensible time" and in paragraph 47 Epicurus continues:

> Nor with the respect to [its] moving body does it [the *eidolon*] arrive at several places at once by reference to the times viewed by reason; for this is unthinkable. But arriving all at once in a perceptible time from anywhere at all in the infinite, it will not be separate from the place from which we comprehend the motion. For it [the quickness of the motion] will have a similarity to collision even if we leave the quickness of the motion without collisions up to this point" (DL X.47, trans. Asmis)

This rather complex passage on the motion of *eidola* follows Epicurus' statement that the *eidolon* covers the distance that is possible to comprehend in an incomprehensibly short amount of time. How can we interpret this distinction between perceptible and imperceptible time and why is it important for the theory of images? Here I follow Asmis' reading: she says first that it is obvious that here Epicurus is applying his general theory of motion of bodies, according to which the velocity of atoms depends upon the number of collisions they suffer while moving such that collisions are inversely proportional to velocity. And when this theory is applied to the theory of images, she proposes the following reading:

> …Epicurus now points out that although an *eidolon* travels over any perceived distance in an instance of perceptible time, we must not suppose that an *eidolon* is at several places at once. For although with respect to perceptible time the *eidolon* is simultaneously at the place at which it started and at its goal, time is further subdivided by reason in such a way that with respect to these subdivisions the *eidolon* occupies different places at different time.[101]

So the problem Epicurus recognizes is the following. When looking at some object, say a book, images are traveling extremely fast over the distance between me and the book, so the distance is clearly perceptible. However, the assumption that the speed of the coming images is also perceptible entails an inconsistent conclusion that the *eidolon* is at the same time at two places: on the surface of the book and on my eye. In order to avoid this unpleasant consequence, Epicurus introduces the distinction between perceptible and imperceptible time which allows the explanation that the movement of the *eidolon* from the surface of the book to my eye is so fast as to be imperceptible for me, but nonetheless is sequential. Therefore, the images travel enormously fast, with no or a few collisions on their way, thus reaching the

[101] Asmis (1984), 109.

sense organ with the same structure and positions of atoms as in the solid object or with very slight alterations. They preserve that structure and position for a long time, as we find out in the next passage of *Letter*.

Lucretius[102] arguing about the velocity of the *eidola* in *DRN* IV.176-215 follows Epicurus' reasoning that the great velocity of *eidola* is due to the fact that small and light things move rapidly. Besides this argument that appeals to a clear analogy with the things from our experience, such as sunlight, Lucretius offers another two examples. In the first he states that since the effluences coming from within things move swiftly in spite of the fact that other atoms on their path diminish their speed, the velocity of the effluences from the surface where there are no obstacles must be even higher. The last example is not an analogy but, as Bailey rightly notes[103], a straightforward conclusion concerning *eidola*, just like the mirror example. Namely, Lucretius uses the example of the water reflecting the sky immediately and therefore concludes that this case shows clearly that the *eidola* coming from the sky reach the water at once with an extreme velocity.

Paragraph 48 of the *Letter* brings more information about the formation of the images and their emanation. About the formation we are told that the images are formed "as fast as thought" and regarding the emanation Epicurus emphasizes that "there is a continuous flow from the surface of bodies". The continuous flow of atoms opens a possibility for an objection to he theory of images, recognized by Epicurus. Namely it might be objected, as it is pointed out by Bailey[104], that if there is a continuous flow of atoms, we should see the objects as gradually shrinking. However, Epicurus immediately replies saying that the atoms from the surrounding environment are replacing the emitted atoms and thus filling up the loss. The process of filling up happens rapidly because the images are released only from the surface, they are two-dimensional films literally skimmed from the surface, so the solid objects are losing rather small amounts of atoms and "do not need to be filled out in depth". However, as it is noticed by Anderson, Epicurus is not committed to the thesis that objects do not diminish at all, but instead he has to show that the process of losing atoms and consequent diminution is very slow in its nature, generally imperceptible for us and that it happens over a long period

[102] Sedley (1998) points that Lucretius' exposition of the characteristics of *eidola* (*simulacra*) is slightly of a different order than Epicurus' in the *Letter to Herodotus*. They both starts with the arguments for the existence of *eidola* and their fineness, but Epicurus in the *Letter* first exposes the arguments for the speed of their motion and then for the speed of their generation, while Lucretius reverse the order. Since the same, reversed order Epicurus has in the work *On nature*, Sedley takes this as part of the evidence for the claim that exactly that work and not the *Letter* is Lucretius primary source of Epicureanism.
[103] Bailey (1947), 1203.
[104] Bailey (1928), 408.

of time.[105] This idea is supported by the examples we find in Lucretius' text, such as the cases in which "the curved ploughshare of iron imperceptibly dwindles away in the field, and the stony pavement of the roads we see rubbed away by men's feet" (Lucretius, *DRN* I.313-316) which support the idea that objects perish, but they do that very slowly, as is evident from sense perception.

Epicurus again in paragraph 48 emphasizes the most important part about the formation of *eidola*, namely that they keep the same position and arrangement of atoms as they had as a part of the solid object. Here he adds that the same structural position is preserved for a long time, although it might be sometimes disrupted. Later in the text we shall discuss these cases in which *eidola* get damaged, but for now let us focus on the normal cases in which *eidola* reach the sense organ perfectly unchanged. Exactly the fact that they retain the same position of atoms as in the solid object from which they are released is the foundation for the justification of the thesis about the truthfulness of perceptions. It is because of this, as Bailey points, that *eidola* are "a faithful reproduction of the surface of the body, simply because the atoms composing them were, in fact, themselves that surface".[106]

Therefore, the beginning of paragraph 49 states it is only when there is "the impingement of something from outside that we see and think of shapes". What exactly this "something from outside" is stated just a few lines later where Epicurus reveals the final formulation of the physical process of perception saying:

> For external objects would not imprint their own nature, of both colour and shape, by means of the air between us and them, or by means of rays or of any effluences passing from us to them, as effectively as they can through certain delineations penetrating us from objects, sharing their colour and shape, of a size to fit into our vision or thought, and traveling at high speed, with the result that their unity and continuity then results in the impression, and preserves their co-affection all the way from the object because of their uniform bombardment from it, resulting from the vibration of atoms deep in the solid. (DL X.49-50, trans. LS 15A)

These passages need particularly careful reading. In spite of a few repetitions of certain remarks about the character of the *eidola* that are already pointed out, Epicurus is here introducing several new and extremely relevant insights about the theory of vision. However, at this point I will focus mainly on the points relevant for the mechanism of vision. Namely, in the next step Epicurus claims that the vision of objects occurs due to the *eidola*, which once they reach and enter the sense organ produce a presentation or impression (*phantasia*). We shall leave aside for now a detailed explanation of the notion of *phantasia* and concentrate

[105] Anderson (http://fs6.depauw.edu:50080/~jeremyanderson/research/Epicurus.pdf), 4.
[106] Bailey (1928), 408.

only on the mechanism of perceiving. So, the first important point Epicurus makes here is that the immediate cause of vision are *eidola*. In other words, without *eidola* it could not be possible to see objects and therefore they are the means by which vision occurs. The fact that exactly *eidola* are the immediate cause of vision for Epicurus is important because only in that case is it possible to preserve the idea that external objects literally 'imprint their nature' into us, and consequently to open the door for the justification of the thesis that all perceptions produced in such a way are necessarily true. Nevertheless this is due to the main characteristic of *eidola*, namely that they retain the same atomic structure as the solid and thus keep the closest possible resemblance to it. What follows from this is the following. The presentation produced as a result of an imprint of such a cause, without any other mediator, is the most probable candidate for a reliable and truthful representation of the external stimulus. [107]

This explains Epicurus' focus in the first sentence of the quoted passage that is to reject other theories according to which vision occurs by means of a certain medium such as air or ray. In fact, the first one according to which presentation is made by means of air was proposed by Democritus and adopted later by Aristotle, while the second theory, which takes the rays to be a medium, was held by Plato. Thus, Epicurus aims to emphasize the advantage of his theory of vision by pointing out the main flaw of the rival theories, namely the introduction of a mediator, because that moves away from the ideal picture in which objects are literally 'stamping' themselves on us and opens the possibility of having unfaithful presentations. (Although it is not usually mentioned in the usual reading of this passage, it seems that Epicurus is rejecting the third possibility, namely the one in which certain effluences are emitted from us towards the object which faces the same problematic consequences as the other two theories that proposed mediators unlike objects perceived.) Nevertheless, the general idea of Epicurus' eidolic theory is to remove any possibility of intervention in the process of the formation of the presentation from things other than the object perceived and the sense organ. Only in this case it is possible to achieve direct acquaintance and similarity with the external object and to be certain that the produced presentation truly matches its cause.[108]

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[107] We shall discuss this in more details later as a part of discusion of the notion of 'truth' (*alethes*) and what exactly it means that perceptions are *true*. However, the strategy is already indicated and given by saying that our perceptions truly match with the solid because *eidola* as their objects perfectly match with solid that emits them.

[108] Later I will explain further the connection of perception with the world via *eidola*. So far let me indicate that I take it that the proper object of perception are *eidola* but because of the causal link between *eidola* and the external solid, it is not mistaken to say that they put us in connection with the objects in the world.

After the explanation of the emanation of *eidola* as a specific successive flow from the surface of solids to the sense organ, paragraphs 49-50 tell us about the mechanism of reception of *eidola* by the sense organ. It seems that in the reception what plays a crucial role, as Asmis notices, is the appropriate size of *eidola*; they must fit the sense organ but also, the stream of the *eidola* must be commensurable with the sense organ. According to Asmis, the commensurability is of special importance since it has an explanatory function to "indicate that there is a match in size between the *eidola* and the physical makeup of the organ of perception".[109] In other words, Epicurus wants to emphasize here that the sense organ can receive only those particles which are appropriate for that specific organ, as eyes are able to receive only *eidola* which are fit them by size and which are commensurable with the specific sense organ. So, eye cannot receive eidola that is too big for the pupil, so that *eidola* should be of an appropriate size in order to penetrate the sense organ, and also it cannot receive eidola which is commensurable with, for example, ear, since the theory presupposes that each sense organ admits only those eidola appropriate for it. The same analysis, as we shall see later, is applied in the case of other sense organs.[110]

But here the argument starts to appear as if the organs were actually made in such a way to fit and to be commensurable with eidola. The explanation of the mechanism of perception, thus, starts to strongly echo teleological explanation. Epicurus is known for his rejection of any teleology, claiming that mechanistic explanation only fits the atomistic theory and the purposes set by the moral theory (before all, the aim is to remove the fear from the gods). Therefore, for the Epicureans the inference from the function of some object to the conclusion that the objects in question is made purposively for that function is simply mistaken.[111] Lucretius argues in the following way:

> One mistake in this context, which I am determined you should shun and the precautions to avoid, is that of supposing the clear lights of the eyes to have been created in order that we might see. […] All other explanations of this type which they offer are back to front, due to distorted reasoning. For nothing has been engendered in our body in order that we might be able to use it. It is the fact of its being engendered its use. (Lucretius, *DRN* IV.823-57, transl. LS 13E)

[109] Asmis (1984), 115.
[110] At this point I just want to indicate the importance of the commenusrability of perceptual particles with the organ itslef which shall be discussed later. Namely, this description of the specific co-ordination between the external impulse and the sense organ serves as a further justification of perceptual incorrigibility and of Diogenes' report from X.32 on the impossibility of one perception to refute another one.
[111] This is the view advocated by Aristotel (for example, Aristotle, *On the Parts of Animals* I.640b30-641a6) and the Stoics (for example, Cicero, *ND* II.27-6).

So the target is clearly the argument from design. The Epicureans offer a different explanation: that the infinite number of atoms randomly might produce various objects, such as worlds or animals. In regards of animals they maintain that it is plausible to infer that only those which have the nature with the best advantages, that is, which are adapted the best in their environment, will survive.[112] However, the problem with such an explanation, raised by their opponents, is that it is highly improbable that the random atomic collisions would provide such perfectly ordered universe and creatures.[113] The Epicureans reply that given the infinity of time and number of atoms, it is conceivable that infinite numbers of atomic arrangements can be produced. And as far as the function of the animals and their organs, Epicurus maintains, as I already said that the environment would make selection among the animals and the functioning of their organs. The important to notice is that the process of selection is not purposive but a result of a random atomic collision. The same explanation then is applied for the sense organs and the commensurability of particles coming from outside that enters the sense organs and cause perception.

Besides this problem, Epicurus' theory about the mechanism of vision faces a pragmatic difficulty to explain the reception of *eidola* when they meet the sense organ. One well-known problem, among many other mechanical difficulties[114], discussed by both ancient and modern commentators, is the following. Namely, it is natural to suppose that *eidola* skimmed and released from the surface of the book are of the same size as the book, which no matter how small a book you have in front of you, is far bigger than the size of human pupils. So the problem points to a general difficulty according to which macroscopic solid objects, namely the objects of our visual experience, release *eidola* whose dimensions are in fact inappropriate to be received by the sense organ. Neither Epicurus nor Lucretius elaborates on this issue, so we are left with Epicurus' vague note that *eidola* must 'fit' the sense organ. Traditional debate on this issue is nicely summarized by Anderson, who isolates two possibilities for the explanation of the way *eidola* 'fit' our eyes in order to be able to enter the organ and produce the vision. He names them the contraction and the convergence model of reception.[115]

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[112] Cf. Lucretius, *DRN* V.837-77 = LS13I.
[113] Cf. Cicero, *ND* II.93 = LS 54M.
[114] I will focus only on one, probably the most famous problem for Epicurus' mechanism of vision. The reason for avoiding some deeper analysis of the mechanism of vision is best explained by Bailey (1928) who says: "But the discussion of such mechanical difficulties is not perhaps profitable, as Epicurus' theory of vision could not in any case be now supported as even a plausible explanation. It is more worthy of observation that he has once again secured indirect contact between the object and the eye and that the general idea, though crude, is not after all so very far removed from the 'sight-wave' theory of modern science." (413)
[115] Anderson (http://fs6.depauw.edu:50080/~jeremyanderson/research/Epicurus.pdf), 17-24.

According to the contraction model[116], the *eidola* must be reduced to the appropriate size of a human pupil, in order to be able to enter the organ as a whole and thus cause the presentation of the object as well as the whole. According to Bailey the reduction is due to the external cause since *eidola* "in passing through the air, slight as they are, would yet be beaten upon all sides by a large number of atoms and loose compound bodies".[117] On the convergence model *eidola* retain the size of the solid object, so not the whole *eidolon* enters the eye, but rather particles of the *eidolon*, each the size of the pupil. In order to see the whole object the eye then must somehow gather together the fragmented peaces like a jigsaw to get the presentation. Anderson rightly observes that both models suffer from some serious difficulties. It might appears that the contraction model is more acceptable since it is simpler and more importantly in accordance with the main characteristic of the *eidola*, that they as a whole retain the resemblance with the solid. In the case of the convergence model, among some other problems, it is hard to guarantee that the eyes will gather the fragmented particles of the *eidolon* in the right way and retain the resemblance with the solid.

So in the explanation of the external part of the mechanism of vision we arrive at the point at which the perceptual stream enters the organ and produces a presentation or the vision of the objects. In that process of emanation of *eidola* we can never perceive a single *eidolon*, but always our presentation is of the external object itself, as it is stressed by Lucretius in *DRN* IV.256-264. The continuous stream of *eidola* combined with the extreme speed of their motion is particularly important for the explanation of the following phenomena. First, it is important to emphasize that only continuous streams of atoms are capable of producing the presentation and not just one *eidolon*. Next, it is because of the continuity of the flow that our vision of objects is stable, because "otherwise objects would appear to flicker and our perception of moving objects would be choppy".[118]

So far we have discussed the cases in which streams of *eidola* are coming from an external solid and enter the eye, i.e. the normal cases of sensory perception. However, Epicurus clearly says in paragraph 49 of the *Letter* quoted above that by impingement of something external we not only see, but also think. This implies first, that Epicurus understands that the mind (*dianoia*) sometimes functions in the same way as the sense organs, and second that *any* case of vision, either sense-vision or mental vision is due to an external cause, i.e. *eidola*. Now we have to explain the cases in which vision is not obtained by sense-

[116] Cf. Bailey (1928), 411-2, De Witt (1954), 205, Rist (1972), 21-4.
[117] Bailey (1928), 412.
[118] Anderson (http://fs6.depauw.edu:50080/~jeremyanderson/research/Epicurus.pdf), 3.

organs, as is obviously the case when one is seeing non-existent objects, such as Centaurs or Scyllas, but also in many other cases such as dream-visions or imagination. The duality in the functioning of the mind is described by Asmis as follows:

> The term *dianoia*, generally translated as "mind", refers to the activity or faculty of thinking (*dianoeisthai*) just as the term *opsis*, "sight", refers to the activity or faculty of seeing (*oran*). In both cases, the activity consists in having images. *Dianoia*, therefore, does not imply the use of reason. The images that occur in thought may be rationally organized by *logismos*, "calculation", but thought includes also such irrational processes as dreaming, daydreaming, and hallucinating.[119]

In other words, the role of mind is not oriented exclusively on operations of reasoning, but sometimes mind operates in the same way as sense organs. But what is the mechanism that explains such irrational operations of mind? How do we see the non-existent objects? Epicurus starts from the assumption that the cases of mental perception share an important similarity with the usual cases of seeing external objects, namely that there is something, some outside object that is seen. Lucretius says that insofar as "what we see with the mind is like what we see with the eye – it must come about in a like way" (Lucretius, *DRN* IV.750-51, transl. LS). In other words, the similarity implies that it is not possible to have a vision without having a vision of something since in each case we encounter something. From this then the general rule might be inferred that for any perception, including the mental one, cannot be originated spontaneously, but must be caused by the object of its attention.

In the usual cases of perception of external things the cause is a continuous flow of *eidola* released from the surface of the solid as a result of the constant internal vibration of atoms within the solid. In such cases only the continuous stream may cause a vision in the eye. In the case of mental perceptions Lucretius introduces small changes when it comes to the external mechanism that gives rise to mental perceptions. Namely, the mind need not be simulated by a constant stream of *eidola*, because a single *eidolon* might enter directly into the mind and produce a presentation (*DRN* IV.745-8).[120] So just as in the case of sense vision, Epicurus now has to give an account of the formation of *eidola* which produce mental perception, that is, of *eidola* which are not coming from the surface of the existent objects. And second he has to explain the way the mind receives those *eidola*.

In Epicurus' writings there is no extant discussion of the formation of such *eidola*, but he mentions that "sometimes such films are formed very rapidly in the air, because they need

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[119] Asmis (1984), 105-6.

[120] For a view that Epicurus nevertheless holds that *all* perceptions, including the mental ones, are caused by a succesive stream of eidola, see Asmis (1984), 135-6.

not have any solid content; and there are other modes in which they may be formed" (DL X.48, trans. Hicks). We find more on this topic in Lucretius who supports the idea of the spontaneous formation of *eidola* in the air again with the examples from our experience, of seeing clouds gathering in the sky and forming various shapes like mountains or monsters (Lucretius, *DRN* IV.129-42). Analogously there are many floating *eidola* in the air released from various solids which might in the same way as clouds get together and form many different shapes. Lucretius distinguishes two possibilities of such spontaneous eidolic formation. First, they can be produced by a chance combination of two or more *eidola* coming from different solid objects which form a complex *eidolon*, for example an *eidolon* of a Centaur. Namely, in the case of a Centaur, *eidola* coming from a horse and a man, which are freely floating in the air, are accidentally combined and such a newly produced *eidolon* directly strikes the mind causing the vision of a creature half horse half human being that actually does not exist. In the second case Lucretius explains the formation of dreams which result from the continuous flow of *eidola*, which do not produce a single presentation but instead "produces the 'cinematographic' effect of its being the same image which is moving".[121]

When it comes to the reception of such *eidola*, Lucretius writes that the things that stir the mind are of much finer composition than the regular *eidola* and because of this characteristic they "penetrate through the interstices of the body, and awake the thin substance of the mind within, and assail the sense" (Lucretius, *DRN* IV.728-31). In other words, due to the specific and subtle texture of *eidola* formed in the air, only the mind is capable of registering and receiving such delicate stimuli. This means that although mental *eidola* are striking other parts of bodies, sense organs are too insensitive to be stimulated by such *eidola* and not commensurable with them.

So, Epicurus' aim is to show that there is a parallel between mental and sense perception. In proposing his theory of perception Epicurus is obviously guided by the following thought. The best way to secure the truthfulness of perception is to prove that perceptions are not self-moved but always caused by something external to them. In other words, Epicurus follows the previously emphasized commonsensical intuition that perception occurs only when there is an object to cause it and that even in the cases of mental visions there is something we encounter. That perception is relational and caused by external objects seems plausible for the usual cases of perceiving the macroscopic objects. What makes

[121] Bailey (1947), 1271.

Epicurus' causal theory of perception specific is the fact that the causes of perception are *eidola* which always match in atomic configuration with the solid from which they are released. The objects from outside determines perception, and since in perceiving it is not possible to causally affect the nature of the cause, perception must be valid. In other words, it is not possible for perception not to accord with the cause or to give a mistaken report about its cause. But what about the cases of mental perception? For example, it seems rather strange to claim that in hallucination there is an external object causing the vision. Or even worse, does this mean that we cannot volitionally and instantaneously think of whatever we want, but have to wait for *eidola* to enter our mind?

The cases of mental perception are therefore especially important for Epicurus, because it is a crucial part of his methodology to prove that *all* perceptions are true, including mental ones, since only in that case is knowledge possible. However, what is striking about such a theory of mind and thought, as Asmis emphasizes, is the fact that "all thought consists of images produced by particles entering from outside a person"[122]. This raises many problems set forth by Lucretius, of which the most important one is the explanation of the fact that we can think instantaneously of anything we like. That is to say, it is quite obvious that mind is capable of engaging in deliberate imagination and visualization in which it seems it does not wait to be passively stimulated. And Epicurus seems to agree, as we shall see, that the mind in the process of mental perception is not passive, but also actively participates in the process. Here we are approaching another important issue in Epicurean epistemology, namely the problem of focusing of mind and of other sense organs (*epibole*) in the process of formation of *phantasia*. To put it differently, in the next step our task is to set out in more detail the formation of *phantasia* and the specific internal role of the mind and the sense organ in that process. Before we continue with that discussion let me just briefly explain the external mechanism of other perceptual modalities.

2.2.2. Hearing, smell, taste and touch

In the *Letter to Herodotus* Epicurus talks about hearing and smell (DL X.52-53), while in Lucretius we find presentation of all senses.[123] In both processes, just as in vision, the

[122] Asmis (1984), 106.
[123] See Lucretius, *DRN* IV.524-722.

mechanism is explained as the impact of certain particles coming from outside on the sense organ. So the general framework is the same for all modalities, since there is always a certain emanation, but what is different is the explanation of the sort of particles that cause the perception and their formation. Since in Epicurus' and Lucretius' writings most of the debate is dedicated to sight, we shall follow the same pattern and briefly present the mechanism of the other senses.

In the case of hearing, there is a current (*reusis*) coming from the source that emits the particles producing the sound. However, the stream is "broken into homogeneous particles, which at the same time preserve a certain mutual connexion and a distinctive unity extending to the object which emitted them, and thus, for the most part, cause the perception or, if not, merely indicate the presence of the external object" (DL X.52, trans. Hicks). So hearing is caused by specific particles that directly strike and enter the ear causing hearing. Therefore, in accordance with the materialism which Epicurus adopts, the noise is explained as something material. The reason for pointing out that the current is split into smaller particles is to secure the possibilities that many people can hear the same noise at the same time. However, the smaller aggregates, into which the current is split, preserve the same atomic arrangement as the source of noise, just as the *eidola* in vision keep the semblance of their sender. Here, Epicurus also adds that they not only correspond to the source of noise, but also each of the broken particles are exactly the same between themselves.

As regards smell Epicurus asserts very generally that it is caused by appropriate particles that might be of a different sort, thus causing the differences in the smell from pleasant to unpleasant (DL X.53). In fact, the mechanical pattern of emanation and reception of particles is more or less similar to hearing, which is probably a reason why neither Epicurus nor Lucretius elaborates it at length.

In Lucretius we find a description of the remaining two senses, taste and touch. What is similar to both of them is that they are caused directly by the external object and not by some stream or current of particles which is released from the solid, as in the case of the other three senses. In the case of taste we chew the food and so "then that which we squeeze out is distributed abroad through all the pores and palate and the tortuous passage of the spongy tongue" (Lucretius, *DRN* IV.620-624, transl. Smith). Lucretius clarifies that the differences in taste, such as bitterness or sweetness, are caused by differences in the atomic shape of the particles. An important characteristic of both taste and smell is that they apparently seem to be subjective, expressing not much about the nature of the thing that causes the perception but rather our own and private effects in the sense organ. So the cases of the conflict between

different taste perceptions are one of the usual objections to Epicurus' claim that all perceptions are equally true.

The sense of touch is not separately discussed by Lucretius in the same systematic way as the other senses. He mentions that when we "knock a stone with a toe, we touch the very uppermost surface of the stone and the outermost colour, but we do not feel this by touch, but rather we perceive the real hardness of the stone in its depths" (Lucretius, *DRN* IV.265-8, transl. Smith). So just as in the case of taste, we are in direct contact with the object without any mediator. In spite of the fact that sight is taken to be the most important sense, being the most informative one, it is usually accepted that touch is actually used as a paradigmatic sense. It is paradigmatic because all other senses are in fact reduced to touch because they all rest on the same general rule: in order to have a perception there must be a contact between the organ and external stimulus. External stimulus literally always has to touch the sense organ in order to produce a presentation, i.e. *eidola* touch our eye's membrane.[124] Bailey rightly points that this idea is "essentially inherent in a material system"[125], emphasizing Lucretius' own words: "for the touch, so help me the holy power of gods, it is touch that is the bodily sense" (Lucretius, *DRN* II.434-5, transl. Smith).

So, generally the Epicurean view of the external mechanism that causes all perceptions can be explained as consisting the following four elements: (i) there is always an external cause, that is an appropriate atomic stream of *eidola* for vision or other appropriate particles (*onkoi*) for each sense organ; (ii) the cause or the stream is such that it retains a resemblance with the original source; (iii) there is also a causal continuity with the source, because of the permanent emanation; (iv) there is always a commensurability between the external stimulus and the sense organ, such that each sense organ admits only those particles appropriate for that organ and (v) that eidola must fit the organ in size. The first element, as already mentioned, shows the general framework of Epicurus' theory of perception as the causal one, since every perception necessarily is explained by reference to its external cause. The four remaining elements, as we shall see in what follows, serve as necessary conditions for the justification of the claim that all perceptions are true, because they provide the foundation for the claim that perception cannot but accord with its cause and consequently they explain the correspondence of perceptions with external objects.

[124] To be more precise, when I say that external stimuli 'touch' the sense organ I mean that there is always a bodily contact, while the case of touching, as a specific perceptual modality, it means bodily contact followed by a tactile sensation.
[125] Bailey (1928), 404.

However, Epicurus mentions in 50 that sometimes position and arrangement in *eidola* could be distorted, as in the case of the well-known example of a tower seen from a distance and from nearby discussed by Lucretius and Sextus. The possibility of disturbance is also mentioned in 52 in a corresponding discussion of the flow of appropriate atomic aggregates (*ogkoi*) released from the sounding object. So let us first concentrate on the mechanical explanation of the distorted *eidolic* stream and perceptions they cause, and then we shall examine the epistemological consequences opened up by the possibility of distortion. As reported by Lucretius and Sextus the example tells us that a tower seen from a distance appears small and round while from nearby it appears large and square because of the following mechanical explanation. Namely, *eidola* traveling a long distance from the tower to the sense organ get damaged because, as Lucretius reports, "while the images are rushing through a great space of air, the air with frequent buffetings forces it to become blunt. By this means when every angle at once has escaped our vision, the stone structures appear as though rounded on a lathe" (Lucretius, *DRN* IV.358-61, transl. Smith). A similar report about distortion of *eidola* is given by Sextus in *M* VII.208-9, who more explicitly says that perceptions of the tower seen from a different distance are in fact caused by different *eidola*, "because when the sense-object appears to it small and of that shape it really is small and of that shape, the edges of the images getting eroded as a result of their travel through air. And when it appears big and of another shape instead, it likewise is big and of another shape instead" (transl. LS 16E).

It would seem from what has been said so far that it follows straightforwardly from the analysis of the mechanism of perception that the genuine objects of perception are *eidola* (or appropriate *ogkoi* for the sense organs other than vision)[126]. It is supported by what Epicurus says in paragraph 49, quoted above, namely that it is only by the constant impact of something external, namely *eidola*, that we see and think of objects.

However, allowing the possibility of the distortion of *eidola* has serious epistemological consequences. Namely since perceptions might be caused by damaged *eidolic* streams, than it follows that they cannot be regarded as if they always accurately accord with their source, e. g. a tower, and therefore perception either turns out as an unreliable cognitive source, which is the skeptical solution, or it follows that only some perceptions are true. In addition, we have already seen that not all perceptions are caused by *eidola* released from the external solids, but can be formed freely in the air, as in the cases of mental vision, and can

[126] In the remaining text I shall concentrate on the case of visual perception, taking it as a paradigm for other perceptual modalities, and therefore in exposition of external stimuli I will refer to *eidola.*

very easily be considered as if they had a solid object as its source. Therefore, in order to defend the central claim that all perceptions are true, we have to see how Epicurus' theory on the mechanism of perceiving explains what are usually taken to be the cases of misperceptions, that is, how it solves the challenge posed by the argument from conflicting appearances.

It appears that in order to solve the problem of the apparent conflict between perceptions it is crucial to provide an adequate answer to the central question: what are the proper objects of perception? In a broader epistemological context, the question about the objects of perception entails taking into consideration more general epistemological problems. Namely, in order to understand the claim that perceptions are true, we have to elucidate what in fact is the content of perception to which the notion of truth is ascribed. Consequently, this entails elucidation of the proper sense of the Greek term for 'true' (*alethes)* which by itself is ambiguous, meaning both real and true, implying thus two rather different interpretations of the claim that every *aisthesis* is *alethes*. However, the ambiguity of the claim does not depend only on the meaning of *alethes*.

When talking about ambiguity of the terms, the term 'perception' is not without difficulties. The first problem is that it is translation of the Greek terms *aisthesis* and *phantasia,* which technically are not synonyms. As Striker explains, *aisthesis*, "where it does not denote the faculty of sense-perception, is translated either as 'sensation' – meaning the process of being acted upon by a sensible object – or as 'perception' – meaning recognition of a sensible object (as in 'I see a man') or of an sensible fact (as in 'I see that it's raining'). *Phantasia*, on the other hand, is usually rendered as 'sense impression' or 'presentation', meaning the result of the process of perception."[127] In his writings Epicurus uses both terms, though regularly and frequently *aisthesis* when referring to the criterion of truth, but without any clear distinction between 'sensation' and 'perception'. *Phantasia* is explicitly used by Epicurus, as in 50, to denote the result of the impingement of *eidola* on the sense organ, both for the sense and mental vision, but with a clear idea that all *phantasiai* are truthful. Since the idea as such does not appear in Epicurus writings, but is ascribed to him by other philosophers as a slogan of his epistemology, we have to consult other sources to determine whether his central thesis includes *aisthesis* in the narrow sense of sensation or the broader sense of *phantasiai* as *alethes*. Striker located three different versions of the thesis that all *phantasiai* are truthful in other sources[128]: (i) in which both terms are used: 'All the impressions

[127] Striker (1996), 77-8.
[128] Ib., 78.

(*phantasiai*) reaching us through the senses (*aisthesis*) are *alethes*' (Plut. *Adv. Col*. 1109 B, transl. De Lacy); 'Every *aisthesis* and *phantasia* is *alethes*' (Aristocles apud Eus. *Praep. Ev*. XIV, 20, 5, transl. Taylor); (ii) using only *phantasia*: 'Every *phantasia* is *alethes*' (SE *M.*VII.203-4, 210); (iii) using the term 'senses' instead of the two: 'My senses are veracious' (Cicero, *Luc*. 25, 79, transl. Brittain).

What can be inferred from this is that the sources do not use the terms uniformly which in fact reflect Epicurus' practice of using both terms interchangeably as *alethes*, including all the cases of sense and mental perceiving as the criterion of truth, without precise specification of their content. The strict difference between *aisthesis* as a 'sensation' or 'faculty' on one side, and '*phantasia*' as a 'presentation' or 'appearance' was developed later when those terms became technical terms in Hellenistic epistemology, primarily used and distinguished as such by the Stoics. Epistemologically the distinction in the sense between *aisthesis* and *phantasia* is important because strictly speaking only *phantasia*, having propositional content, can be evaluated as true or false. Therefore, it is necessary to understand what the proper content of *aisthesis* or *phantasia* is in order to establish it as the criterion of truth which is supposed to give us knowledge. This consequence is tightly connected with the previously mentioned two different readings of the term '*alethes*', as 'real' and 'true', facing us with two rather different interpretations of what on Epicurus' account it means to claim that perceptions are true. However, in order to offer a complete justification of the thesis that all perceptions are true first we have to examine Epicurus' account of the internal role of the sense organ in the process of perceiving.

2.3. Internal mechanism of perception

Epicurus' explanation of the central thesis does not end with the external account of the perceptual mechanism. An equally relevant part of the theory of perceiving for justification of the incorrigibility of perceptions and the central claim that 'all perceptions are true' is the response of the sense organ to the external stimulus and internal contribution made by the sense organ itself. In the case of mind, internal contribution is twofold, consisting of both an irrational response to the impingement of *eidola* and rational interpretation of what is reported by perception. Understanding of this inner process of formation of perceptions, combined with a proper understanding of the object and the content of perception should provide us in the end with Epicurus' solution to the problem of conflicting appearances and

his explanation of perceptual truth as a foundation for the criterion of truth. So, let us start first with the equally relevant, internal part of the mechanism of perceiving.

One part of Epicurus' explanation in 49-50 of the formation of *phantasia*, namely its external part consists of the constant impact of the *eidolic* stream on the sense organ. Epicurus goes on to explain the internal part in the paragraph 50 in the following way:

> And whatever impression (*phantasian*) we get by focusing (*epibletikos*) our thought or senses, whether of shape or of properties, that is the shape of the solid body, produced through the image's concentrated succession or after-effect. (DL X.50, transl. LS 15A)

To start with a general remark, this sentence, as Asmis rightly points out, is considered as central for the understanding of Epicurean epistemology since it here Epicurus sets out "a criterion of truth, as he identifies a certain type of presentation [*phantasia*] with a certain state of affairs".[129] The veridicality of perception is explained in terms of a perfect correspondence between perception and the external reality or states of affairs, as Asmis puts it. In the description of the truthfulness Epicurus now introduces some new and more technical terms that are supposed to explain internal response of the sense-organ or mind and to reveal a condition for the reliability of perceptions, namely the two methods by which they are obtained. So, in the first sentence is introduced an important new term that characterizes the internal response of both the sense-organ and the mind, by saying that every perception (*phantasia*) "we get by *focusing* (*epibletikos*) our thought or senses" is true. As we shall see, the term *epibole* plays particularly important role in the explanation of attaining mental perceptions. And in the next sentence he specifies two methods of obtaining perceptions (*phantasiai*), that is, by a concentrated succession of *eidola* and by their after-effect.

To the list of Epicurus' vague and ambiguous epistemological terms we can add the term *epibole* which has been subject of much debate. First it occurs in the introductory note of the *Letter* in 36 in a very general sense, where Epicurus warns his students to memorize the *Letter*, in order to be able to focus (*epibole*) on the facts (*epi ta pragmata*). More specific meaning occurs later in the *Letter* when he exposes the core demand of his epistemology, namely "that we should observe (*terein*) everything in the light of our sensations, and in general in the light of our present focusing whether of thought or of any of our discriminatory faculties" (DL X.38, transl. LS 17C), thus setting out perceptions as the main criterion against which everything should be tested. Similarly as in 50, *epibole* is used in 62 and *KD* XXIV where he in fact summarized what he takes to be the criterion of truth. In 62 Epicurus says

[129] Asmis (1984), 127.

that "our canon is that direct observations by sense and direct focusing (*epibole*) of the mind are alone invariably true", and in *KD* XXIV repeats almost the same in the context of distinguishing between formed opinion and something "what is already present through sensation, through feelings, and through every focusing of thought into an impression (*phantastike epibole tes dianoias*)". So, what in fact is *epibole*?

Interpretations of the term and of its function within Epicurus epistemology can be divided in two groups: in the first are those commentators who take it that *epibole* is a voluntary and active act made by the sense organ and mind and on the other those who deny it. The most prominent reading in the first sense is given by Bailey who claims that "the natural meaning of *epibole* used of operations of the senses or the mind is a 'projection upon', and so 'attention to', and, with added notion of the result, 'apprehension' and even 'view'"[130]. To this he adds that those acts, both of the sense and the mind, contains of an active element and are opposed to mere passive response to external stimuli. Another part of his reading is interpretation of focusing of the mind (*epibole tes dianoias*), for which he takes to be "the immediate apprehension by an act of mental attention" and "the immediate or 'intuitive' apprehension of concepts, and in particular of the 'clear', i.e. self-evident concepts of scientific thought"[131]. The later part of the explanation aims to show that perceptions obtained by *epibole tes dianoias* single out specific class of perceptions which are always true for which Bailey takes to be supported by 38 and 62 of the *Letter*, and *KD* XXIV. Bailey thus introduces classification of perceptions, claiming that only those perceptions produced by *epibole*, both of *aisthesis* and *dianoia*, are without falsity: in the case of the senses *epibole* is apprehension of the 'clear vision' of the near objects, while in the case of the mind *epibole* is a direct mental apprehension of the 'clear' concepts.[132]

An interpretation of Epicurus totally opposed to Bailey's is given by Furley. Not only does he criticize Bailey for taking *epibole tes dianoias* as picking out specific, veridical class of perceptions about scientific concepts, but he also challenges the suggested idea that *epibole* characterizes active engagement of the sense organ and the mind in the process of perceiving. The key argument, Furley maintains, is the fact that among the perceptions that are obtained by *epibole* are included dreams and all other kind of imaginary visions, for which Epicurus in 50 claims to be *alethes* in the same way as all other perceptions obtained by *epibole*. Given

[130] Bailey (1928), 560.
[131] Ib., 561.
[132] The role of *epibole* in the sense associated with the concept-formation, indicated here by Bailey, will be discussed in a part on preconception. Namely in the formation of preconception the mind functions in this other, active sense, of reasoning and calculation.

the fact that among epibolai we find both dreams and waking perceptions, Furley concludes that "we have therefore incontrovertible evidence that *epibole* is not necessarily an act of concentration or deliberate attention"[133]. For Furley then *epibole* does not have any important role in Epicurus' theory, but is explained as completely passive process which just serve as an explanation of how illusory and dreamy perceptions are obtained. Furley establishes his reading on the paragraph 51, but also on Lucretius' discussion of dreams and illusory images (Lucretius, *DRN* IV.722-76) where Lucretius defend Epicurus' idea that all cases of perceptions are caused by something real, namely *eidola*, and thus equally trustworthy.

Indeed, Lucretius' report might be helpful in settling the issue on *epibole*. He very carefully examines Epicurus' obscure idea that even mental perceptions are also caused by some external stimuli, based on the principle that "insofar as what we see with the mind is similar to what we see with the eyes, it must come about in a similar way" (Lucretius, *DRN* IV.750-1). We have already seen Lucretius' explanation of the external mechanism of mental vision consisting of much finer sorts of *eidola* that are floating freely around and may be hooked up in many various combinations, such as Centaurs or other non-existing things. However, Lucretius, being aware of the problems Epicurus' theory of mental vision faces, presents the possible challenges to the theory and replies to them as follows:

> This matter raises many questions, and there is much that we must clarify if we want to expound the facts clearly. The first question is why each person's mind immediately thinks of the very thing that he has formed a desire to think of. Do the images observe our will, so that as soon as we form the wish the images impinge on us, whether our desire be to think of sea, land or sky? Are assemblies, parades, parties and battles all created and supplied by nature on demand, and in spite of the fact that everything which the minds of other people in the same place thinking of is quite different? A further question is, what about our seeing in our dreams the images rhythmically going forward and moving their supple limbs, when they fluently swing their supple arms in alteration and before our very eyes replicate the gesture with matching foot movements? No doubt the images are steeped in technique, and have taken lessons in wandering to enable them to have fun at night-time! Or will this be nearer the truth? Because within a single period of time detectable by our senses – the time it takes to utter a single sound – there lie hidden many periods of time whose existence is discovered by reason, it follows that everywhere at every time every image is ready on the spot: so great the speed and availability of things. And because they are delicate the mind can only see sharply those of them which it strains to see. Hence the remainder all perish, beyond those for which the mind has prepared itself. The mind further prepares itself by hoping to see the sequel to each thing, with the result that this comes about. Don't you see how eyes too, when they begin to see things which are delicate, strain and prepare themselves, and that there is no other way of seeing things sharply. As a matter of fact, even with things plain to see you can discover that the result of failing to pay attention is that it becomes like something separated from you by the whole of time and far away. (Lucretius, *DRN* IV.777-813, transl. LS 15D)

[133] Furley (1967), 208.

So it is clear that Lucretius sets out an Epicurean idea that mental vision has an external stimulus, which Long and Sedley explains as motivated by a Platonist assumption, "so common in Greek thought, that if I succeed in thinking of x then x must objectively exist for me to think of"[134]. Two major challenges for the view according to Lucretius are the explanation of deliberate and immediate thinking of anything a person likes and the explanation of dreams.[135] Lucretius' reply consists of two arguments. The first argument aims to show that there are infinitely many *eidola* that might cause all kinds of possible perceptions by appeal to already introduced distinction between perceptible and imperceptible time. Namely, in any perceptible period of time "reason can distinguish many smaller periods in each of which 'idols' of all sorts are present everywhere, swiftly moving in great numbers"[136]. To put it simply, in the external world there exist not only those *eidola* that are immediate causes of our mental vision at certain moment, but enormously many *eidola* of all kinds, floating around and moving rapidly in an imperceptible period of time, that is "as fast as thought", ready to be perceived. Therefore, we can think of anything we want because all kinds of *eidola* are actually floating around. The second argument explains the fact that we can think of anything we want is explained by the 'preparation of the mind'. The preparation of the mind is explained in an analogy with seeing small things when our eyes have to strain to see small objects. Analogously the mind has to prepare itself or to focus on the things wanting to observe.

The function of the second argument is to explain that we can think of anything deliberately on the grounds that there is a special ability of mind to focus voluntarily on certain *eidola* and neglect others that corresponds to Epicurus' notion of *epibole tes dianoias*. Lucretius finds the support for this claim on an analogy with sense-experience. Namely, in the case of perceiving some delicate or thin object eyes have to "prepare themselves", that is to ignore all other visible objects and focus on just that particular thing in order to "see it sharply". From this Lucretius concludes that in all cases of perceptions both the sense organs and the mind have certain internal responses by which they are able to pick out and focus on particular *eidola* among an enormous number of others. This again corresponds to Epicurus' text where he associates *epibole* with both the senses (*aesthesis*) and the mind (*dianoia*). This supports the idea previously mentioned that the mind in Epicurus' theory of perception function in the same way as the sense organs, and just as in order to see any external object

[134] LS, 78.
[135] According to Bailey (1928) Lucretius was probably aware of some severe criticims adressed to Epicurus' theory of mental perceiving by Cicero's *ND* I.38. This suggestion is accepted by Asmis (1981).
[136] Bailey (1947), 1273.

with our eyes we have to pay attention to that object, in the same way in order to imagine or think of anything the mind has to focus on a particular object of thought. The idea that the mind is putting some effort in obtaining perceptions led Bailey to conclude that *epibole* indicates an active response and that the focusing of the mind guarantees veridicality of perceptions. He relies on Lucretius' example of eyes' making an effort to produce a sharp and clear perception of an object, claiming that in the cases of the senses *epibole* produces a clear and close view of an object as it is in reality. According to Bailey "all 'images' perceived by the sight are true, because they correspond to an external reality, but it is only the 'clear image' obtained by 'apprehension of the senses' [*epibole tes aisthesis*] which can be used as the basis of scientific knowledge"[137]. The analogy with the mind's focusing implies that also 'sharp and clear' perceptions are obtained, namely such perceptions that are always truthful as a result of direct intuition guaranteeing us the grasp of scientific concepts. This interpretation of *epibole tes dianoias* goes neatly with the fact that it was added as the fourth criterion of truth by later Epicureans. Namely, *epibole tes dianoias* as a result has a sort of intuitive knowledge of the clear concepts such as atoms and void and thus secure certainty of the main postulates of atomistic theory. Since these concepts are self-evident (*enarges*) truths, Bailey takes it to be a good explanation of why *epibole tes dianoias* is later added as the fourth criterion of truth.

However, Bailey' claim that *epibole* is an act that singles out specific class of perceptions that can be regarded as truthful seems to be directly opposed, first, to the fact that *all* perceptions are produced by focusing (*epibole*) of the senses or the mind and second to Epicurus' central idea that unless *all* perceptions are accepted as equally reliable and trustworthy, knowledge becomes unattainable.[138] As Furley notices, *epibole tes phantasias* is used in order to explain all cases of mental vision, including illusory images and dreams. The idea that in fact *all* perceptions are produced by *epibole* will be supported when we come to the explanation of the methods by which perceptions are produces in the organ.

But nevertheless Lucretius' arguments indeed show that *epibole* refers to some kind of active response by the sense organ and the mind. This needs to be explained, especially since Epicurus establishes the truthfulness of perception on the claim that they are passive responses. So maybe a promising interpretation of *epibole* is in fact a good combination of

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[137] Bailey (1928), 243. Similarly De Witt (1943) claims that "the phrase *phantastike epibole* is itself a reason for rejecting the statement that all sensations are true".

[138] The distinction that appears in the *Letter* between perceptions from a 'close' and "distant' view (52), supported by Sextus' distinction between perception 'on the source' and of what is 'outside' (*M* VII.206-9) will be discussed later, but I will claim that this does not imply that Epicurus distinguishes between true and false perceptions.

Bailey's and Furley's positions, namely the one offered by Asmis. She sets out her view as follows:

> It is clear from Lucretius' discussion that the act of straining does not serve to mark off veridical from deceptive presentations. Rather, it serves to bring an object into focus; and the more intense the straining, the more distinct object. […] But we may suppose that in all cases of perception an object is brought into focus as the result of some straining by the perceptual organ. An *epibole*, "application", therefore, is a response by which the perceptual organ makes an effort to bring an object into focus; and it is neither guarantee of a truthful presentation nor simply a passive submission to external influence.[139]

Asmis' interpretation of *epibole* accepts Bailey's reading according to which *epibole* is an active response both from the sense organ and the mind combined with Furley's reading that this does not guarantee any kind of selection between perceptions such that *epibole* produces only truthful one. It seems to me that Asmis' rightly takes over those parts of the two offered readings of *epibole* which are at best supported by the evidence. However, the notion of the 'activity' of the organ needs to be qualified more precisely. Namely, it is obvious from Lucretius' examples that the sense organs and the mind make an active response that can be understood as focusing on a particular object of attention. Probably this just means that in order to see some particular object, one has to make some cognitive effort, that is, to focus and pick out that particular object as the object of attention and not some other present in the extremely rich visual field. But how does the fact that Epicurus recognizes this active element square with his view that senses are just passively responding to external stimuli? It seems to me that there is no inconsistency in Epicurus' view because the ability of the sense organs and the mind to focus is rather limited action. Namely, an act of focusing should be understood just as the ability of the sense organ and the mind to receive external stimulus, but does not imply that in that process they are engaged in any other cognitive process or operation with the stimuli. At the beginning of 49 Epicurus maintains that external stimuli are 'coming in' (*epeiseimi*) from the external object so the activity of the sense organs is supposed to be understood, I suggest, only in as much as they let in some of the stimuli. In addition, the activity of the organ is further qualified by the fact that each sense organ 'let in' only those stimuli that are commensurate with the organ and appropriate in size. From this it follows that the focusing of the sense organ and the mind is an ability to give attention to the fitting objects.[140] And as Asmis concludes, focusing (*epibole*) of the sense organ and the mind

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[139] Asmis (1984), 126.

[140] We shall return to this issue later in discussion of the appropriate objects of perception and the conseqence it has on the thesis that all perceptions are true.

when functioning as the sense organ is a response that is not volitional but an automatic, passive response and receiving of external stimuli that results in obtaining a perception (*phantasia*). This idea can be traced in Furley's definition of *epibletikos* as the "process by which the mind or the sense 'get hold of' something"[141].

Let me just briefly turn to the problem of *epibole tes dianoias* as the fourth criterion. In Bailey's, rather problematic view, it is clear that it is taken as the criterion since it produces only veridical perceptions, namely scientific truths. The fact that later Epicureans added it as the independent criterion of truth might reflect the following. Since *aisthesis* in Hellenistic epistemology, especially under Stoic's influence, was not used to denote all kinds of perceptions, but those produced by the senses, maybe the addition of *epibole tes dianoias* was supposed to emphasize Epicurus' idea that *all* perceptions, including mental ones, are the criterion of truth. This can be further supported if we consider two methods by which perceptions are obtained.

Within the internal mechanism of obtaining perceptions Epicurus recognizes two methods by which perception is produced after an external object affect the organ, namely concentrated succession and remaining. The first one, concentrated succession (*puknoma tou eidolou*) clearly indicates the continuous stream of *eidola* released from the surface of the solid and when the contact with the sense organ is made, perception is produced. As already emphasized, Epicurus maintains that no single *eidolon* can ever produce a perception but only a constant stream coming from the solid's surface.

However, the second method of after-effect or residue of *eidola* (*egkataleimma tou eidolou*) is more problematic for interpretation. The common understanding of the method is that it applies strictly to mental perceptions, obtained by the impact of the very fine *eidola* which, instead of impacting on the eye, penetrate straight through to the mind. Among proponents of this reading is Bailey who claims that "it may be sometimes that the single 'idol' will penetrate through the pores of the body to the mind itself".[142] What happens when such an *eidolon* impacts on the mind is elucidated by Furley who claims that such *eidola* passes through the mind, but leave some mark on the soul and that the 'remaining effect' (*egkataleimma*) is "a pattern left behind as a memory of a previous sense-experience".[143] The function of the remaining effect is probably to secure an explanation of the way memory works since Epicurus, to emphasize again, claims that not any perception is self-moved. The

[141] Furley (1971), 611.
[142] Bailey (1928), 414.
[143] Furley (1971), 611.

similarity between true and allegedly false perception lies in the fact that they are produced in the same way. Thus the function of *epibole tes dianoias* is to explain the way the mind acts as if it were a sixth sense organ.

What is more important about the sentence in which Epicurus introduces two methods of obtaining of perception is the explanation of what makes a true perception, that is, he gives the condition of the truthfulness and explanation of the perception as the criterion of truth. Let me repeat the quote again. Epicurus maintains that "whatever impression (*phantasian*) we get by focusing (*epibletikos*) our thought or senses, whether of shape or of properties, that is the shape of the solid body, produced through the image's concentrated succession or after-effect". In other words, every perception produced by the two methods is true because it accurately corresponds to its cause and truly represents the shape and other properties of an object. Accuracy of the perception is thus grounded in the two methods. This is so because Epicurus maintains that the *eidola* is an identical replica of the solid released from its surface and retains the same atomic arrangement as in the solid.

In order to stress the perfect correspondence between *eidola* and the solid Epicurus says about *eidola* that "their unity and continuity then results in the impression, and preserves their co-affection (*sumpatheia*) all the way from the object because of their uniform bombardment from it". (DL X.50, transl. LS 15A) The co-affection or sympathy is a relation between the *eidola* themselves and the external object from which they are emitted and it plays a crucial role in securing the truthfulness of perceptions. This is the reason why we have a perception of "the single and continuous object", because sympathy works as the condition that secures perceptual unity and immediate awareness of an external object. The fact that in perception we are immediately aware of an external object is emphasized by Epicurus who claims that perception is "of the solid body" or even clearly in Lucretius who maintains that "one thing in this matter which should not be thought puzzling is why, although the images which strike the eyes cannot be seen individually, the objects themselves are perceived". (Lucretius, *DRN* IV.256-8, transl. LS 15C) Asmis describes Epicurus' strategy in the following way:

> Accordingly, in the sentence on the form of the solid, Epicurus is proposing a single criterion of perceptible reality: the direct response of the perceptual organ to particles that have entered from outside. Instead of drawing distinction between truthful and deceptive presentation, he eliminates this distinction by identifying the external object of perception with the content of a perception.[144]

[144] Asmis (1984), 139.

I agree with Asmis' explanation that includes all the main conditions for the truthfulness of perception, namely (i) the direct response of the organ (*epibole*), (ii) external cause (*eidola*), to which we should add, the third crucial thing, namely (iii) sympathy (*sumpatheia*), that is, the correspondence between *eidola* and the source from which the unity of perception arises, as we are told in 50. And I agree with Asmis that Epicurus' solution is to deny the distinction between true and false perception on the basis of identifying the content of perception with the external cause, since in that case perception is true because simply the truthfulness of perception consists in the exact correspondence between perception and its cause and there is nothing else to which it can correspond. But what is not clear from Asmis' elaboration is what in fact the proper object of perception is. And that seems to be crucial part of the justification of the claim about perceptual incorrigibility, as we shall see.

However, it seems that both Epicurus and Lucretius clearly point out the possible candidates for the proper cause: *eidola*, which are immediate causes, the external solid as the object of which we are aware in our perception and properties of the object, such as shape or colour of a solid. What is also clear from Epicurus' theory is that he wants to preserve the intuitive idea that our perception is always perception of external objects, such as towers or honey, and that such a perception is the one that is always true. This intuition leads to the conclusion proposed by some commentators that it is more than clear that the proper object of perception have to be external objects. But this reading, no matter how tempting and intuitive seems to be, faces the serious problem, namely it is challenged by the argument from conflicting appearances. The tower seen from afar produces a different perception from the one seen form a nearby. If the object of perception is the tower, than perceptions are reporting two different contents of the same object and one of them is clearly false.

In order to solve the problem that I have just indicated and to justify the thesis that 'all perceptions are true', Epicurus has to reply to the argument from conflicting appearances and to explain the source of the error. The solution lies in providing an answer to the question first about the proper objects of perception in order to determine the content of what we are ascribing as true or false, and second in determining the sense of *alethes*, that is to decide whether it should be understood as 'real' or 'true'. So let us closely examine the cases that are usually taken to be misperceptions.

2.4 Justification of the thesis 'all perceptions are true'

Epicurus' account of the mechanism of vision, according to which perception is a result of the impact of *eidola* on the sense organ and the internal, passive response of the sense organ, is supposed to grant that the content of perception is entirely determined by the external cause. Since all external objects are emanating *eidola* which preserve the same atomic configuration as the solid from which they are released they are exact replicas of the solid, being of the same shape and colour as the solid and thus are truly reporting the nature of the solid. Two things are important to emphasize: first, given such mechanism of perceiving, it is obvious that the solid does not affect the sense organ directly, but via *eidola*, and second, it is important that *eidola* in an ideal situation preserve all the properties of the solid on the basis of which it is possible to maintain that perceptions correctly report the solid as it is.

In the ideal situation, the *eidola* perfectly match the solid, and we feel that there is nothing wrong in such a case to say that the perception truthfully report the object as it is and consequently that the object of perception is the external solid. In other words, here we find a perfect correspondence between perception and the object, representing the nature of the thing as it really is. Because of this we can say that perceptions reveal the truth about the external objects and when they report, say a tower to be square, their report is accurate since the *eidola* affecting them preserve the exact structure and the properties of the tower from which they are emitted, i.e. the *eidola* are square, revealing thus the true nature of the tower. The justification of the incorrigibility of perception in that case follows directly from the physical mechanism of perceiving as we are told in the previously quoted passage 50 of the *Letter*. So in this ideal cases of perceiving the intuitive idea that the proper object of perception is an external solid, i.e. a tower, seems to be perfectly plausible and clearly emphasized by Lucretius that in the process of perceiving we never perceive the *eidola* but always an external solid. This aim clearly follows from Epicurus' overall epistemological project that attempts to secure knowledge about the world by providing a standard by which knowledge can be gained. Thus, in order for perceptions to play the role of the epistemic standard of that kind, it is necessary for them to reveal the truth about the external objects, e.g. towers, oars and the like, and to objectively represent their nature.

But what about the cases when perceptions do not represent an actual state of affair, as in the case of seeing a tower as round or an oar in the water as bent, or even worse in the cases of 'seeing' Centaurs or Scylla, and of dreams. If the truth of all perceptions should be understood, as for instance Bailey claims, in the sense of the 'truth' as an exact correspondence between the content of perception and the external solids as the objects of perception, the examples set forth show that this is simply false and easily refute that

interpretation of the truthfulness of perceptions. Bailey's solution for the cases of misperception, such as a tower seen from a distance or an oar submerged in water, suggests distinguishing between the cases of "'the clear images' obtained by the 'attention of the senses' (*epibole ton aistheterion*) which alone is of scientific value" and all others, although a few lines later in the text he states that "all 'images' perceived by the sight are true, because they correspond to an external reality, but it is only 'the clear image' obtained by 'apprehension of the senses' which can be used as the basis of scientific knowledge"[145]. What is unclear from Bailey's interpretation is why not all perceptions are used as a foundation for knowledge, if as he says, all perceptions are 'true'. The problem lies in the fact that he ascribes truthfulness to *all* perceptions, but nevertheless picks out only the 'clear images' as a basis for knowledge. This anyhow implies that only the latter sort of perceptions are the kind that should be considered as 'true' in the sense of the criterion which Epicurus seeks to establish. DeWitt follows Bailey's idea that Epicurus distinguishes between the classes of perception, but makes a step further in interpretation claiming that it is totally mistaken to ascribe to Epicurus the thesis about the truthfulness of all perceptions, because Epicurus "clearly indicated by the terminology he employed the difference between true and false presentations. A true presentation is *phantasia* or a *phantastike epibole* while all others are styled *phantasmata* or *phantasmoi*".[146] So the first problem we have to deal with is the interpretation of the thesis that 'all perceptions are *aletheis*' if as Bailey and DeWitt suggest Epicurus distinguishes between true and false perceptions.

Some scholars suggest that the solution for the problem, as previously mentioned, is to be found in a different interpretation of 'true' (*alethes*) in the thesis that 'all perceptions are true (*alethes*)', namely in the sense of 'real'. The main evidence for this reading are the passages from Sextus *M* VIII 9, where he says that for Epicurus there is no difference between saying that a thing is 'true' and 'real' and the passage DL X 32 where Diogenes reports the Epicurean position saying that "the reality of separate perceptions guarantees the truth of our senses. But seeing and hearing are just as real as feeling pain" (transl. Hicks). Also in the last sentence of Diogenes' passage 'truthfulness' of perceptions in the case of madmen and in dreams is elucidated by the fact that in those cases some movement occurs, that is to say that misperceptions are just as real as normal perceptions in as much as they show that something appears to us. The 'realistic' reading is here supported particularly by the fact that *alethes* of

[145] Bailey (1928), 243.
[146] DeWitt (1943), 21.

misperceptions is contrasted and opposed to 'what does not exist' (*to me on*) implying that *alethes* is then synonymous to 'exist' (*to on*).

One of the first among scholars who offered the 'realistic' reading of *alethes* is DeWitt who suggests that 'true' (*alethes*) should be taken to denoting "*to on* or *to huparchon*, self-existent or arising from self-existent", claiming that only in this sense all perceptions are 'true', i.e. real or existent because all perceptions have material cause. This reading according to DeWitt is supposed to save Epicurus' central thesis that 'all perceptions are true' from being notoriously absurd by showing that Epicurus attribute *alethes* to all perceptions only because "false presentations also register themselves; they are *alethes*, 'real', but they are not true as a *phantasia* is real and true".[147] Therefore, DeWitt's main argument is that this reading is supported by Epicurus' own terminology used to indicate the distinction between true and false perceptions, taking it that true perceptions are called *phantasia* or *phantastike epibole*, while false ones are *phantasmata* or *phantasmoi*. So in the case of perceptual errors, *phantasmata* of a madman are not characterized as *alethes* in order to denote their truthfulness, but mere existence of a perceptual state of a madman, while truthfulness is reserved only for *phantasiai*. Thus, DeWitt concludes that Epicurus in fact did not hold at all that *all* perceptions are equal in trustworthiness, as the long tradition of his rather hostile critics accused him of.

Long establishes his reading of *alethes* as 'real' on the analogy between perceptions and pain from Diogenes' passage where he claims that perceptions are *alethes* in the same sense as pleasure and pain are.[148] From this Long infers the following:

> If we consider the truth to be only a function of propositions and translate *alethes* by 'true', Epicurus' usage will seem illegitimate. A headache is not something true or false. In Greek, however, *alethes* is regularly used to designate what is real or actual as well as the truth of statements. Epicurus' applications is perfectly intelligible if we take him to be saying that these notions give us perch on certain facts, namely: that of which they are awareness.[149]

Long suggests similarly as DeWitt that perceptions should not be taken as 'true' in the usual, propositional sense, but only as a 'real' state of awareness just as a headache is.[150]

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[147] DeWitt (1939), 416.

[148] This is based on Sextus' report about analogy between the truth of perceptions and of experiences of pleasure and pain in *M* VII.203.

[149] Long (1971), 116.

[150] Here Long seems to be offering also a rather problematic interpretation of the truthfulness of perception consisting only in having incorrigible awareness of our inner mental states. That is to say, when I see a tower as round, my perception is true only in as much as I am really having that appearance and I am aware that I am in the subjective state as if the tower appeared to me. This issue will be later explored in more detail, but let me just briefly indicate the problem with such a reading. It seems that Epicurus' aim is to secure that our perceptions are

Namely, the force of the comparison with the headache consists in questioning of the possibility that perceptions are the sort of things that can evaluated as true or false in the same way as opinions if they are taken to be *alethes* in the same sense as pleasure and pain. Since it seems rather implausible to claim that headache is 'true', preferable reading of *alethes* turns out to be 'real'. Rist continues in the same direction claiming that "what Epicurus means when he says that all sensations are true is that a real event takes place in the act of sensing"[151]. He establishes his reading on the fact that Epicurus takes perceptions to be irrational (*alogos*) and impossible to refute (DL X.31-32). The irrefutability of perceptions Rist interprets in the following way:

> There is nothing to refute; sensations do not involve any reasoning of any kind, either true or false. They are simply what happens to the atomic components of the sense-organs of the body, and in Epicurus' view all reasoning depends on them. How he interprets these bodily happenings is another matter; the happenings themselves are true in the sense of being actual data through which we obtain contact with the external world.[152]

It seems that Rist's reading thus suggests that the fact that perceptions are *alogos* implies that 'truth' should not be understand in the same sense as 'truth' ascribed to propositions because perceptions, being *alogos*, do not have such a content that can be characterized as true or false being just "bodily happenings". Recently the same interpretation according to which *alogos* means that perceptions have no content is offered by O'Keefe.[153] In his view perceptions as non-propositional and always *alethes* are contrasted to opinions which are propositional and therefore eligible for evaluating as true or false which is supported by Epicurean theory of distinguishing between two kinds of movements that happens in the act of perceiving and judging. (DL X.51) To this important difference between perception and opinion we shall return again later in the discussion, but let me now sum up the main points of the 'realistic' reading of *alethes*.

The main motivation for this reading is to solve the difficulties and the absurdity that come out of the claim that *all* perceptions are equal in trustworthiness which seems to be simply false because of many cases of perceptual error. By taking *alethes* as 'real' it becomes more plausible to claim first, that the illusory perceptions of a madman and dream visions are 'true', that is, 'real' events in one's perceptual sensory organs; second, the 'realistic' reading

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not true of their internal subjective experience but of external reality, because only in that case can Epicurus bridge the gap between appearances and reality and reply to the skeptical challenge.

[151] Rist (1971), 19-20.

[152] Ib., 20.

[153] O'Keefe (1997), 132.

fits better with the comparison of perceptions with pain and pleasure, as a kind of states which cannot be characterized as 'true' having no content to which the truthfulness in a propositional sense can be ascribed; and finally the third, namely that the comparison with the bodily states accords with the characterization of perception as *alogos*, because of which perception, just like a headache, cannot be evaluated as true or false, having no propositional content. Therefore, according to this reading only opinions can be taken as true and false *simpliciter*, while perceptual 'truthfulness' consist only in being a real event, i.e. the sense organ being stimulated by real, existing *eidola*.

In spite of the fact that it seems that some passages suggest plausibility of the 'realistic' reading of *alethes*, this interpretation faces some serious difficulties. First of all, if the textual support is considered closely, it rather begins to speak against the theory. We can start with Epicurus' own writings from the Letter where he says the following:

> But falsehood and error are always located in the opinion which we add. For the portrait-like resemblance of the impressions which we gain either in sleep or in certain other focusings of thought or of the other discriminatory faculties, to the things we call existent and true [*tois ousi te kai alethesi*], would not exist if the things with which we come into contact were not themselves something. And error would not exist if we did not also get a certain other process within ourselves, one which, although causally connected, possesses differentiation. (DL X.50-51, transl. LS 15A)

This passage comes right after the explanation of the main conditions for the truthfulness of perceptions in 50, explaining now the source of error and thus broadening his explanation of the theory of perceptions as the reliable basis for obtaining knowledge. Epicurus does that by introducing within the theory a sharp distinction between opinions and perceptions through which his view of the role of perceptions as the criterion of truth finally becomes fully explained and justified. But since our present focus of interest is finding out the genuine sense of the term 'true' (*alethes*) let us examine first whether the quoted paragraph support the 'realistic' reading of the term.

The general point Epicurus wants to stress in the paragraph is that the veridicality of perceptions is opposed to opinions which, unlike perceptions, sometimes are false. Therefore, the first sentence explains the error in cognition that lies in the judgment. But the second sentence where Epicurus speaks about the alleged misperceptions and their resemblance to "the things we call *existent* and *true*" is crucial for the understanding of the sense of *alethes*. Although commentators do not take this passage into consideration for the present issue, it seems to me that Epicurus in the passage makes a rather important emphasis by using the words 'existent' (*ousi*) and 'true' (*alethes*). I suppose he does that not accidentally, but in

order to illustrate what he takes to be a reliable perception, by both words. I take it that this suggests that we should at least be cautious and not rush into the conclusion that he just carelessly repeats synonymous words (if we take *alethes* to mean 'real' or 'existent') at the crucial paragraph on the distinction between the truth and the falsehood. It appears that Epicurus in fact wants to establish the truthfulness of perceptions on a close connection with the reality, that is, to keep the commonsensical understanding of truth of perceptions as the exact correspondence of perception with what it presents. This is supported with Sextus' report from *M* VIII 9 that for Epicurus 'true' is "which is in the state in which it is said to be" and 'false' is "that which is not in the state in which it is said to be". In other words, it seems that Epicurus holds that the notions of 'truth' and 'reality' are necessarily paired though not as a synonyms but as necessary conditions for building the argument about trustworthiness of perceptions. The reason for their inseparability lies in fact that, as Striker maintains, Epicurus "seems to use the undoubted reality of our impressions as an argument for their correctness"[154] Sextus in fact in the passage speaks about the objects of perception being true, and given that, he does not make distinction between true and real. Nevertheless for perception Sextus says that da it is *aletheuein kai houto to on lambanein hos eiche phuseos auto ekeino*, which means that perception both tells the truth and "grasp the things that is, in the way in which that the very things is in its nature" (transl. Grgić). It seems to me that this suggests and opens another reading according to which Epicurus ascribes to perceptions the same function of truthfulness as to opinions, since to perceptions are characterized as aletheuein, that is, in a different sense that the objects of perception.[155] Further evidence for this interpretation is the next Sextus' report where he says:

> The peculiar function of sensation is to apprehend only that which is present to it and moves it, such as colour, not to make the distinction that the object here is a different one from the object there. Hence for this reason all perceptions are true. Opinions, on the other hand, are not all true but admit of some difference. Some of them are true, some false, since they are judgments which we make on the basis of our impressions, and we judge some things correctly, but some incorrectly, either by adding and appending something to our impressions or by subtracting something from them, and in general falsifying irrational sensation. (*M* VII 210, transl. LS 16E = Usener 247, part)

It seems that Sextus here stresses the fact that Epicurus uses the notion 'true' (*alethes*) in the same sense both for perceptions and opinion. What does that mean exactly? Well it means that the truthfulness of both perceptions and opinions consists in "the systematic

[154] Striker (1996), 83.
[155] This is my modification of the suggestion about reading of Sextus' suggested by Filip Grgić.

correlation between a true report and the reality of what it reports"[156], that is in the fact that perceptions always perfectly accord with its cause and thus cannot be mistaken in representing it, while opinions bring both accurate and false reports. But if the term *alethes* denotes different meanings when applied to perceptions and opinions as the 'realistic' reading suggests, then it cannot explain this essential distinction between perceptions and opinions. The absurdity of the 'realistic' view Everson explains by saying that "the contrast between perceptions and beliefs will be that whereas all perceptions are real (or involve awareness of something real), some beliefs are real while others are not (or do not involve awareness of something real)"[157]. Therefore, the advantage of the 'truistic' reading is that it preserves the epistemological relevance of the claim that all perceptions are true by taking that perceptual truth is the correspondence between perception and the object it represents, which follows from the fact that every perceptions has a real, external cause. And this is exactly the way Sextus reports that:

> For, the Epicureans say, if an appearance is said to be true whenever it comes about from a real thing and in accordance with just *that* real thing, and every appearance is produced from a real thing that appears and in accordance with the very thing that appears, necessarily every appearance is true. (*M* VII.205, transl. Bett)

That all perceptions are *alethes*, that is, that every perceptual report perfectly accord with its cause, is guaranteed by the characteristic of perceptions which are, unlike opinions, irrational (*alogos*) and passive responses and totally incapable of any intervention in the content of what they represent. On the other hand opinions are such that they involve interpretation of perceptual reports, thus opening a possibility for the falsity. The worry that the 'truistic' interpretation has to solve is to show that perception being *alogos* is compatible with the propositional reading of 'true'. Namely, the holders of the 'realistic' theory used this point as the strongest argument, in my opinion, to prove that perceptions because *alogos* have no propositional content (just like a headache) and therefore cannot be evaluated as 'true' *simpliciter*, but only as a real and existent event. So, how does the irrationality (*alogos*) fit the propositional reading of 'true'?

On this issue Taylor writes as follows:

> The special status of *aisthesis* as witnesses is due to the fact that the reports which *aisthesis* gives represent that physical stimulation with perfect accuracy. And the accuracy of those reports is

[156] Taylor (1980), 113.
[157] Everson (1990), 167.

guaranteed by the fact that *aisthesis* is *alogos*. What this seems to mean is that *aisthesis* lacks the capacity to form any judgment about the pattern of stimulation presented to it; its function is restricted to representing as it is. But that representation has a content to which truth and falsity are applicable; the special feature of that representation is that in fact it always true.[158]

Taylor also stresses that the perceptual truth is based on the contrast between perceptions and opinions according to which only perceptions are always true. Namely, on the one hand we have irrational perceptions, which are true in virtue of being incapable to make any changes in the report they passively receive. On the other hand, the truthfulness of opinion is vulnerable exactly because in the process of making judgments one starts to interpret, infer or classify perceptual reports and that process is not error-free. In other words, the point is that the contrast between opinion and perception, which is without doubt part of Epicurus' explanation of perceptual truth, cannot be set out if the notion of truth is not in the same way ascribed to both perceptions and opinions. Therefore, this implies that the truthfulness of perceptions is ascribed to certain content as it is in the case of opinions. But as it is previously pointed out, the fact that perceptions are entirely affected by some external cause and totally passive in that process, enables them to *truly* report and represent the *real* cause that produces them. Namely, this is the condition that allows perceptions to serve as the criterion of truth. By taking *alethes* to mean 'real' the importance of perceptions and their major epistemological functions in securing us first, with a reliable connection with the world, and consequently providing us with a foundation of knowledge, is dangerously weakened. Thus the key part of Epicurean epistemology is to establish perceptions as the kind of things that have a content to which the notion of truth is applicable. Speaking in the language of contemporary epistemology, it is perfectly legitimate to characterize Epicurean perceptions as having a content, because they without doubt concerns the external world and "to say that any state has content is just to say that it represents the world as being a certain way".[159]

Striker and Everson also argue that there is in fact no difficulty in regarding sense-perceptions as 'true' in the usual, propositional sense of the word. Everson thus claims that "perceptions, like propositions, are concerned with states of affairs in the world and so are quite properly judged whether the world is such as it is represented or reported as being by the perception. This should be apparent if we accept that the proper way to describe perceptions is by reference to their content propositionally expressed".[160] Striker maintains that the

[158] Taylor (1980), 113-4.
[159] Crane (1992), 139. This idea will be further explained when we come to the specification of the content in Epicurus.
[160] Everson (1990), 169.

incorrigibility of perceptions should be understood as the claim that "all propositions expressing no more nor less than the content of a given sense impressions are true".[161] Therefore, this reading suggests contrary to the 'realistic' one, that Epicurean perceptions do have a content to which truthfulness can be ascribed. Before we continue with the more precise account of the content, we should first determine whether Epicurus treats *all* perceptions equally in regards of epistemic trustworthiness of their content.

The strongest evidence in Epicurus' writings comes in 50 where he writes about the so called misperceptions and dreams as the cases of perceptions that he considers to be 'true' (*alethes*) in the same way as all 'normal' cases of perceptions. This reflects his rather optimistic epistemological ambition to secure the truthfulness of *all* perceptions without exceptions and shows that any reading that introduces discrimination between true and false perception does not have textual support. The part of the argumentation about the truthfulness of perception in 50 is based on the specific relation, namely on the 'resemblance' between the alleged misperceptions and their objects. Epicurus builds the argument about the correctness of such perceptions in the following way. In the first step he claims that in all cases of perception there is an underlying object of perception and second that perception always accord with that object. The evidence for the claim that *all* perceptions are caused by something real is built on the fact that in all cases of visual perceptions it appears as if one perceives a real, physical object. In other words, just as in the cases of normal perceptions where there is an underlying external solid from which eidola are emitted causing perception, all other cases of vision also have their underlying object. Namely, Epicurus writes that there is "the portrait-like resemblance of the impressions which we gain either in sleep or in certain other focusings of thought or of the other discriminatory faculties, to *the things we call existent and true* [*tois ousi te kai alethesi*]". This means that just as in the case of other perceptions, here there is also a cause, namely the object of perception, which he calls "existent and true", to which perception in sleep and in *all other* focusing of mind perfectly match. The causal theory of perception explained by mediation of *eidola* simply is adopted for all cases of perceiving. We can conclude from this that Epicurus does not introduce any classification of perception but treats them all equally: they are produced in the same way, namely by the physical impact coming from outside. However, are they actually all equally trustworthy?

[161] Striker (1996), 90.

The argument about the equal trustworthiness of all perceptions brings us back to the previous chapter and a priori arguments for establishing perceptions as the criterion of truth. What is now added to the a priori argument is the fact that the eidolic theory of vision reveals the real and existent cause of perception and the way perception is produced, by which the a priori argumentation for the establishing perceptions as the criterion becomes supported by the atomistic theory. His strategy reveals the way purely epistemological arguments are now combined and supported by metaphysical ones. Again, this reflects what was previously stated about Epicurus' specific usage of *alethes* as 'true' and 'real' in order to indicate inseparable connection between a true perception and the reality of the external object it presents. The following Plutarch's report captures the idea in which the equal trustworthiness lies in the fact that they all have an underlying object. After giving a list of examples of misperceptions, such as Orestes' vision of the Furies, Plutarch interprets Epicurean position in the following way:

> Things that no artful joiner, puppet-maker, or painter ever ventured to combine for our entertainment into a likeness to deceive the eye, these they seriously suppose to exist, or rather they assert that, if these did not exist, there would be an end of all assurance and certainty and judgment about truth. (Plutarch, *Adv. Col.* 1123 C, transl. De Lacy)

According to Plutarch Epicureans consider *all* perceptions as equal in trustworthiness, that is, even those perceptions which are normally considered as false, and they do that precisely in order to establish perceptions as the criterion of truth because "otherwise there would be an end of all assurance and certainty and judgment about truth". The basis for the equality of perceptions is the resemblance between perceptions which apparently have no underlying object and those which have, which is explained on the basis of same physical explanation of their origin. In the quoted Plutarch's passage the reality (*huparchon*)[162], that is, the necessity of a physical object for occurrence of perceptions is inseparable from the truthfulness. So the epistemological role of perceptions for Epicureans, as Plutarch reports, is to serve as the criterion of truth which actually indicate that *alethes* is supposed to denote much stronger and normative epistemological usage than that as a real cause or a real event. So, the main argument for the taking *all* perceptions as equally true is the one already explored as the a priori argument: unless all perceptions are taken to equally guarantee truth, all knowledge is

[162] Note that Plutarch uses the word *huparchon* together with *alethes*, just as Epicurus in the *Letter* uses *ousi* and *alethes*, to denote that there must be an existing object that causes perception. Again, this just serve as a part of the argument for establishing perceptions as the criterion of truth and does not imply the 'realistic' reading of the thesis 'all percpetion are *alethes*'.

impossible.[163] What is added to the a priori argument is the explanation of the resemblance between perceptions on the basis of the atomistic theory by specifying the objects which causes all perceptions. Therefore, all perceptions are similar in two aspects: in regard to their origin and in regard to their trustworthiness.[164]

Finally, the 'realistic' reading, as Striker points out, "goes against the entire tradition – not just hostile authors like Cicero and Plutarch, but also Lucretius, and Sextus, who seems to be rather impartial in this case, take Epicurus to be asserting something about the truth as opposed to falsity of our impressions, rather than about "truth" as opposed to nonexistence".[165] And it is not *ad hominem* to take very seriously the fact that the authors without exceptions ascribe to Epicurus this odd, absurd and almost indefensible epistemological thesis according to which he treats the figments of madmen, dreaming and all other cases of misperception as true. Therefore, it seems that this clearly shows that Epicurus, first, does not make any differences between perceptions, second, that 'true' (*alethes*) is used in a propositional sense and attributed to perceptual content and third that *alogos* is compatible with propositional reading since *alogos* denotes passivity of perception. After establishing the 'truistic' reading of *alethes*, the next step is to explain what perceptions are true of.

Epicurus, as Sextus reports, takes that 'true' is defined as "that which is as it is said to be" which reflects already emphasized correlation between perceptual representations and the things represented. Therefore, Epicurus' account of perceptual truth can be characterized as a version of the correspondence theory of truth of the Aristotelian kind.[166] In Epicurus' version correspondence consists in the fact that perception as a passive response to the external impact is entirely determined by its cause and thus necessarily corresponds with it. However, the full explanation of the correspondence now requires determining of the truth-bearers of perceptions. So far I have argued that perceptual truth consists in the fact that perceptions being irrational (*alogos*) are not able to represent differently *objects* they are about, because they cannot interpret and think of what is given in the report. Having set things in this way, the crucial task becomes to determine the proper object of perception or as Everson

[163] Similar as in *KD* XXIII, KDXXIV, Cicero, *Acad*. II.25.
[164] What perceptions are true of is separate discussion that I deal with later. Here my aim is to refute the 'realistic' reading of alethes and their argument that Epicurus does not treat all perception as equally trustworthy.
[165] Striker (1996), 81.
[166] Cf. Aristotle, *Metaphysics* 1011b26.

formulates it "to identify which object it is to which it [perception] needs to be similar"[167] in order to be true.

Epicurean identification of the proper object of perceptions is guided primarily by the common sense and explanation of the perception as the fundamental cognitive link with the external world. In other words, perception accurately represents states of affairs and objects in the world. This is the basis for the very common reading that attributes to Epicurus a view that the proper object of perception cannot be other but an external object, from which it follows that the truthfulness of perception of a tower as square consists in the fact that the tower actually is square and thus perceptual representation of the tower accurately represents its properties. Of course, this will work in the case of normal perceptions, but as we have seen, Epicurus wants to apply the same account of trustworthiness to *all* perceptions, that is, to the cases of dreams, illusions, hallucinations, day-dreams and all kind of visions. So the question then is: if perceptions are true of external objects in the sense that they correspond to the external solid representing its properties, what are misperceptions true of? Plutarch report offers some elucidation, although we have to bear in mind that the following text is rather hostile criticism of Epicurean epistemology in which Plutarch tends to equate Epicurean position with the position of the Cyrenaic subjectivism. Plutarch writes the following:

> For the school that asserts that when a round film (*eidolon*) impinges on us, or in another case a bent one, the imprint is truly received by the sense, but refuses to allow us to go further and affirm that the tower is round or that oar is bent, maintains the truth of its experiences and sense impressions, but will not admit that external objects correspond; and as surely as that other school must speak of 'being horsed' and 'walled', but not of horse or wall, so this school of theirs is under the necessity of saying that the eye is rounded or be-angled, and not that the oar is bent or the tower round, for it is the film (*eidolon*) producing the effect in the eye that is bent, whereas the oar is not bent from which the film proceeded. (Plutarch, *Adv. Col.* 1121 AB, transl. De Lacy)

Here Plutarch refers to the fact that Epicureans are cautious when it comes to making judgments about external objects in circumstances where the judgment might turn out to be false. The two most usual examples of this are an oar appearing bent when half-submerged in water and a square tower appearing round from a distance. In such circumstances the Epicureans according to Plutarch restrict themselves to judgments about the way *eidola* impact the eye so as to bring about the perception, which is the foundation of Plutarch's criticism of Epicurean epistemology as being committed to a form of subjectivism, just as Cyrenaics are. Leaving aside for a moment Plutarch's criticism, let us concentrate on his interpretation of the Epicurean position. Namely, Plutarch here follows the Epicurean

[167] Everson (1990), 169.

distinction between perceptions and opinions. The crucial point is that the distinction in the examples can be established only if we take the proper objects of perceptions to be *eidola*, and the objects of opinions external solids. What we have learned previously is that the truthfulness of perceptions is guaranteed by the way perceptions are produced and therefore they are true in regards to their objects. Now we can finally specify the objects of which perceptions are true, namely *eidola*.

In the case of a tower appearing round from a distance, *eidola* that stimulate sense organ are in fact round and thus perceptions accurately report the cause in the moment it impinges on the eyes. That is to say they are not accurate of the tower itself, as an external solid, but accurate in respect of its immediate physical stimulus, the *eidolon*, which we can illustrate as 'the *eidolon* of a far-off tower'. On the other hand, opinion 'A tower is round' as its object has a tower itself, and therefore is false, because does not capture the real property of the object in question. The distinction will be more precisely illustrated later but for now we can use the specification of the content suggested by Striker. The explanation of the difference goes as follows: in the case of perception the content is not expressed only by saying that it includes just the external solid and specific property, but also the distance and perspective at which perception is produced. As Long and Sedley maintains, "since the vision's province is to report not actual bodily shape, but 'shape at a distance', we feel no conflict between the far-off and close-up views of the same square tower: naturally we expect a far-off tower to look different from a near-by tower, since they constitute different objects of sensation".[168] Therefore, according to Epicurus, the conflict in perceptions is just apparent one, because perceptions in those cases have different objects, 'a far-off *eidolon*' and 'close-up *eidolon*'. Their contents thus truly report 'no more nor less then it is given in perception' because perceptions are *alogos*, that is, not capable of interpretation or inference and thus equally trustworthy in representing their objects. Taylor thus argues that "*aisthesis* faithfully reproduces the actual state of the *eidola* when they reach the eye, but it is not part of the business of *aisthesis* to distinguish the small round *eidolon* which you get when you look at the tower from here (i.e. from a distance) from the large rectangular one which you get when you look at it from here (i.e. from close up). That is the work of opinion, not of *he alogos aisthesis*."[169] Similarly in Everson's view "the objects of perception, then, to which the perceptions must accord if they are to be true, are not solid objects but the film of atoms which strikes the senses. Moreover, it is only if the objects of perceptions are *eidola* rather

[168] LS, 85.
[169] Taylor (1980), 116.

than the solid object themselves that the claim that all perceptions are true could stand a chance of being plausible".[170]

Plutarch's report is often cited together with Sextus' outline of Epicurus' error-theory where Sextus presents the Epicurean position as follows:

> Some people are deceived by the difference among impressions seeming to reach us from the same sense-object, for example a visible object, such that the object appears to be of a different colour or shape, or altered in some other way. For they have supposed that, when impressions differ and conflict in this way, one of them must be true and the opposing false. This is simple-minded, and characteristic of those who are blind to the real nature of things. For it is not the whole solid body that is seen – to take the example of visible things – but the colour of the solid body. And of colour, some is right on the solid body, as in the case of things seen from close up or from a moderate distance, but some is outside the solid body and is objectively located in the space adjacent to it, as in the case of things seen from a great distance. This colour is altered in the intervening space, and takes on a peculiar shape. But the impression which it imparts corresponds to what is its own true objective state." (SE *M* VII.205-7, transl. LS 16E = Usener 247, part)

Sextus' report follows very closely Plutarch's interpretation and support the reading according to which the proper objects of perceptions are *eidola*, and not external objects. As Sextus states, the difference between perceptions can be explained only if we take that in perception "it is not the whole solid body that is seen – to take the example of visible things – but the colour of the solid body". In other words, this reading suggests that since every perception has a different immediate cause, every perception in fact presents a different state of affairs. This means that the state of affairs does not refer exclusively to the external object as such and its real nature, but directly to *eidola*, which capture a richer, contextual presentation of a different state of affairs. In Everson' view, Sextus' report explains another important feature of perceptions, namely the fact that perceptions are mutually irrefutable.[171] The argument according to which one perception cannot refute another one because they discriminate different objects was previously explored as a part of the a priori argumentation for establishing the truthfulness of perception within the commonsense understanding. There I argued that Epicurus follows the commonsense idea according to which hearing cannot refute sight because only sight discriminates colours, that is, that irrefutability of perception is established on idea that perceptual modalities are in charge of different properties, specific for each modality. But now, this argument gets fuller justification and explains the reply to the argument from conflicting appearances. As Everson argues, Epicurus can successfully reply and block the argument from conflicting appearances only if an explanation of the conflict

[170] Everson (1990), 177.
[171] Everson (1990), 176.

between perceptions of different senses concerning the same property is provided, as in the case of an oar half-emerged in the water when perceived by sight and touch. In order to argue that such a conflict is apparent, Everson maintains, "Epicurus' point must be not merely that there are some objects which cannot be perceived by more than one sense but that there are no objects which more than one sense can perceive". Therefore, by taking the *eidola* as the objects of perceptions, Epicurus secures a justification for the general claim that each sense discriminates its specific objects, because only specific type of atomic effluences are commensurable with each sense organ. In addition, in the case of the one and the same perceptual modality, as in the case of seeing a tower from different distances, perceptions cannot refute each other simply because those two perceptions are not perceptions of the same state of affairs being produced by different physical stimuli.

This interpretation is promising in explanation of the truthfulness of vision of non-existing objects, as in the example of Orestes' seeing the Furies, and other cases of hallucinations and dreams, namely the cases in which there is no external solid from which *eidola* are released. Sextus reports the following account of the truthfulness of Orestes' perception:

> At any rate, in the case of Orestes, when he seemed to see the Furies, his sensation, being affected by the *eidola,* was true, in that the *eidola* objectively existed; but his mind, in thinking that the Furies were solid bodies, held a false opinions. (SE *M* VIII.63, transl. LS 16F = Usener 253, part)

According to Sextus' report, Epicurus in the case of all perceptions, including hallucinations and dreams, appeals to the same explanation: the truthfulness of sense-perceptions is related to their immediate cause, i.e. the *eidola*. That is, in all cases the equal trustworthiness of perceptions is established on the fact that perceptions always accurately report the state of the impacting *eidola*. Taylor's forensic analogy is now fully explained. Even in the cases where *eidola* are in fact emitted from an underlying external solid, the proper object of perception is not a solid but *eidola*.

However, this reading is not without difficulties. One of the major objections is raised by Plutarch in the previously quoted passage where he accuses Epicureans of holding a form of subjectivism that leads to a skepticism regarding the knowledge of external world. According to Plutarch, the explanation of the trustworthiness of perceptions by the *eidola* as their objects directly opens the problem of the way in which the representational content of perceptions can ever secure us with objective information about the external world. Namely, perceptions in that case do not provide an epistemic link with the objective reality because

their truthfulness refers only to themselves. In other words, just as in the Cyrenaic position, knowledge becomes limited only to knowledge of one's internal and subjective awareness of being in a certain perceptual state. Therefore, as Striker suggests, although the suggested reading of the *eidola* as the objects of perception is appealing because it smoothly solves the problem of perceptual conflict, the cost is too high – it leads to a total inconsistency of Epicurean position and the loss of knowledge of the external world.[172] Nevertheless, a closer examination of Plutarch's argument shows that the identification of the Epicurean position with the form of subjectivism and skepticism seems rather unfair and not textually supported, which opens thus a possibility for a reply to Striker's worry that is to give an account of the way in which representational content relates us to the external world. This is the problem that is also immanent to any representational theory of perception and empiricism as well, because our knowledge seems to become limited only on the awareness of an internal appearance.

The commentators take that the main argument against Plutarch's interpretation is the fact that Epicurean perceptions are not reports of internal mental awareness of a subject, but of external reality. Taylor explains it in the following way:

> For the sceptic's starting point (and his finishing-point too, for that matter) is knowledge of one's own perceptual states, 'perceptual sweetening' etc., whereas the Epicurean starts from direct acquaintance with the physical objects impinging on the senses. The sceptics declare insoluble the problem of justifying the inference from descriptions of perceptual states to statements about external objects. For the Epicurean, on the other hand, descriptions of perceptual states are already descriptions of a percipient in contact with the physical world.[173]

Similarly Glidden argues that "by restricting one's sensory self-awareness to the feelings of pleasure and pain, Epicurus made his materialism compatible with his foundationalist theory of knowledge, since the evidence of perceptual appearances (*phantasiai*) was not to be identified with the subject's inner sensory states"[174]. What follows from this is the fact that such an epistemology and the justification of the thesis that 'all perceptions are true' is inseparable from materialism or, in the Epicurean case, from the atomistic theory. Therefore the crucial difference between Cyrenaics and Epicureans, as Tsouna points out, is "that the knowledge of aesthesis is already knowledge of something physical with which perceiver is in contact, whereas in knowing *pathe* the perceiver is only in contact with himself".[175] Nevertheless what still need to be justified is the way "the inference from descriptions of

[172] Striker (1996), 90.
[173] Taylor (1980), 118.
[174] Glidden (1979), 305.
[175] Tsouna (1998), 118-9.

eidola to descriptions of their causes"[176] is made. This step is crucial in order for perceptions to be established as the criterion of truth, because the truth and knowledge Epicurus aims to secure is knowledge of the physical world and objects in it.

I agree with Everson who argues that it is mistaken "to think that if the objects of perception are *eidola* rather than solid objects then perception will not report on the external world" since "all perceptions report the nature of external objects because all report the nature of *eidola* and these are as external as anything else".[177] Therefore, when *eidola* are coming from an external solid they do represent their cause, before all because they secure the same atomic arrangement as in the solid from which they are released. Nevertheless perceptions do differ in the amount of information they carry about the object and the role of the opining is to determine and interpret the relevant information about certain object. In the case of perceptions of a tower seen from a distant and close-up view, perceptions are causally related to a tower but they are not informative in the same way about it. This does not mean that they are not telling the truth about it, but again, the truthfulness of those perceptions refers to two different contents: a) 'perceiving of a round tower from this position' and b) 'perceiving of a square tower from this position'. Again, it is not a job of perception to infer that the real nature of a tower, because perceptions, just like photographs "do provide genuine evidence, which properly handled can lead to true judgments about external reality".[178]

Perception thus does bear a relation to the external world and it has content that is factive and informative about the world. In that way perception of the tower, although having *eidola* as its object, nevertheless is about the tower, just like opinion. The difference between perception and opinions consists in the fact that their contents are different. In order to elucidate the difference between the contents, I will introduce the notion of nonconceptual content in order to specify the special feature of perceptual content in contrast to content of opinion which is conceptual. Recently the need for the specification of the content of perception is noticed by Everson who suggests, very briefly in a footnote, a guideline for possible thinking on the issue. After accepting that the truthfulness of perception is due to their content that and as such can be qualified as 'true' in a propositional sense, Everson in a footnote makes a following comment:

It should be noted that Epicurus is in good company here, both ancient and modern. Aristotle, for instance, talks happily of perceptions being true. More recent support comes from Christopher

[176] Taylor (1980), 118.
[177] Everson (1990), 180.
[178] LS, 86.

Peacocke, who claims that the 'representational content [of perceptions] concerns the world external to the experiencer, and as such is assessable as true or false' [Peacocke, Sense and Content: Experience, Thought, and their Relations, Oxford, 1983.][179]

I find that Everson's suggestion indicates that Epicurean perceptual content might be interpreted as a part of a larger framework fixed around the debate about the notion of 'nonconceptual content'. In what follows I will try to argue that the modern notion of nonconceptual content can be helpful for the clarification of the following issues in Epicurean epistemology: (i) for the specification of the Epicurean content and its objects; (ii) for the understanding of the truthfulness that is ascribed to the content; (iii) for the explanation of the difference between perception and opinion. Namely, the biggest problem I find in understanding Epicurean texts is the clear difference between perception and opinion and I do not find any satisfactory explanation in offered interpretations. Namely, what seems to be particularly puzzling is the fact that both perception and opinion are true in the same way, as I argued so far. However, when it comes then to the clarification of the exact difference between the two, scholars usually appeal to the fact that perception is about *eidola*, while opinions are about external solids. But I find that solution inappropriate since after all, direct causes of perception are *eidola*, but they are also about the external objects. That is, perception of a tower seen from afar seems to be false because eidola are distracted, but nevertheless, as I argued, still there is a causal link to the object, a tower, and in that sense, perceptions are also about external objects. What seems to be at stake is that the content of perception seems to be different since it captures the distance, the place from which a tower is observed, namely, the pure fact that *it is seen from a distance*. Exactly this is missing in the belief 'the tower is round'.

Therefore, the motivation for introducing the idea of nonconceptual perceptual content in modern epistemology lies in an aspiration to explain the intuition that there is something intrinsically different between perceptual content on the one side and perceptual beliefs on the other, and that that difference follows from the fact that perception is in some sense independent from opinion. Namely, one thing about perception that seems to be uncontroversial is that perception just like belief represents the world to be a certain way which is enough to consider it as having content. However, the question of dispute is whether the content of perception is of the same kind or structure as that of belief. Traditionally it is taken that "the representational content of perceptual experience has to be given by a proposition, or set of propositions, which specifies the way the experience represents the

[179] Everson (1990), 169.

world to be"[180]. This could mean that perception of some thing x, as F (for example, perceiving an apple as red) has to be given in the propositional form 'that x is F', because of which perception becomes dependent upon the perceiver's ability to employ conceptual capacities. Form this it follows that the content of perception understood in that way is then determined by the concepts 'x' and 'F', that is, we could not see that an apple is red unless we have the concepts 'apple' and 'red'. However, advocates of nonconceptualist content argue that although perceptions inform us about the world and thus certainly have representational content just like beliefs, the content of perception differ from the content of belief and need not be characterized as conceptual. They claim that we should be cautious in specifying the content of such representations as purely propositional and conceptual because it will appear to be too restrictive for the content of perception. To put it simply, the question to be answered is whether perceptual representation of the world is conceptualized, that is, whether seeing a certain thing as having a triangular shape requires that one has the concept of triangularity.

In the literature various arguments are offered to express the difference between the representational content of perception and judgment and some aim to show that perception is independent from being conceptualized. For the purposes of this work let us focus on what seem to be the two main arguments: the richness argument and the fine-grained argument.[181] According to the richness argument the content of perceptual experience carries much more information about the objects in the external world, the properties they have and the relations between them than does the content of opinion. My present perception of the view from a window carries so much information about different objects (such as the trees, the leaves, the tree bark, their shapes, colours, relations between them, between me and each object) and therefore is so full of information that it seems to be impossible that in order to have that representation I need to have all those concepts for each thing represented (objects, properties, relations and so on). The fine-grained argument is usually explained through the example that we can perceive and distinguish many more colour shades than we have concepts for. For example, I can experience many different shades of red, without having a specific concept of each shade and therefore, this implies that the content of perception has a specific feature,

[180] Peacocke (1983), 5.

[181] Usually the fine-grain argument and the richness argument are not recognized as two different arguments. I follow the suggestion of Siegel, http://plato.stanford.edu/entries/perception-contents/#6.2) because it seems that by distinguishing them two different features of perception are better illustrated. Other authors add some other arguments, such as the continuity argument according to which the fact that humans share the same representational content with lower animals indicates that the shared content must be nonconceptual since lower animals do not have concepts and yet have representational content. I did not particularly concentrate on that one because it is not so relevant for understanding Epicurean content.

namely fineness of grain, in contrast to opinions, and thus implies a resistance to calling it conceptual.

So, both arguments show that although there is something similar between perception and opinion, namely that they represent the world and thus have content, in some respect their contents are rather different. The difference indicated in both of them is nicely illustrated by Dretske who says:

> Suppose a cup has coffee in it, and we want to communicate this piece of information. If I simply *tell* you, "The cup has coffee in it", this (acoustic) signal carries the information that the cup has coffee in digital form. No more specific information is supplied about the cup (or the coffee) than that there is some coffee in the cup. You are not told *how much* coffee there is in the cup, how large the cup *is*, *how dark* the coffee is, what the shape and orientation of the cup are, and so on. If, on the other hand, I photograph the scene and show you the picture, the information that the cup has coffee in it is conveyed in analog form. The picture tells you that there is some coffee in the cup by telling you, roughly, how much coffee is in the cup, the shape, size, and color of the cup, and so on.[182]

This passage presents Dretske's famous distinction between two sorts of information, digital and analog. The main difference is that information that x is F in analog form has richer and finer content, whereas information in digital form carries just some of the information that is already present in analog form and sorted out from it. From this Dretske concludes that perceptual experience, i.e. sensory presentation, always comes in analog form, and "until information has been *extracted from* this sensory structure (digitalization), nothing corresponding to recognition, classification, identification, or judgment has occurred – nothing, that is, of any *conceptual* or *cognitive* significance"[183]. The process of perceiving, such as seeing, hearing or smelling, is the process in which we simply receive sensory information about x as F without being able to conceptually understand that x is F. The sensory system, says Dretske is like the postal system: it delivers information by means of a causal mechanism, just like a thermometer or camera.

Similarly to Dretske Evans grounds his explanation of nonconceptual content and its distinctive informational character on the analogy with photography. On the grounds of the analogy, Evans emphasizes as a relevant characteristic of such content that it is causally dependent upon the objects it represents, in the sense that "the properties that figure in the content of its output are (to a degree determined by the accuracy of the mechanism) the properties possessed by the objects which are the input to it"[184]. In other words, the content of

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[182] Dretske (2003), 26.
[183] Dretske (2003), 38.
[184] Evans (1982), 125.

perception understood as an informational state is fixed by the objects that information is about in such a way that informational content that x is F would not occur if x were not F.

From this rather oversimplified explanation of the representational character of perception we can extract three main features on the grounds of which such content can be characterized as nonconceptual: (i) the content of perception is replete and has fineness of grain in the sense that perceptual representation carries information about properties, but also about position, relations of objects presented to other objects and to the perceiver; (ii) the representational content of perception causally depends upon the objects it represents; (iii) due to the fact that perception cannot carry information that x is F unless x is F, perceptual content has specific primitive certainty and is veridical by definition.[185] The veridicality condition requires special attention.

What lies behind the third condition is the naturalistic and commonsense intuition according to which it seems normal to say that the content of perception usually accurately represents how things are in the world because it is determined by its external cause. Explained in such a way perception is characterized primarily as the matter of a relation between the perceiver and the object perceived. However, this does not imply that in modern discussion all representational contents are veridical. Perceptual error is usually understood as the case in which the content of representation does not correspond with the way things actually are in the world, as in the case of illusions and hallucinations. Since in those cases representational content fails to correspond with the way things really are, the modern discussion is concerned with securing the so called 'accuracy conditions' under which perceptual content is veridical. So in what sense is the nonconceptual content veridical? This question is largely debatable but I want to concentrate on the formulation of veridicality of the nonconceptual content that seems to be useful for elucidating the Epicurean content of perception. What appears to be crucial for the explanation of the primitive certainty of informational content is the fact that in order to properly grasp it, it is necessary to take into consideration the relevant features of information, namely its repleteness and fineness of grain. Given this, the notion of veridicality thus will include an extensive understanding of the counterfactual supporting evidence (namely, that the informational content would have been different if the information were different) in the way that will make perceptual content more sensitive to the possible different states of the environment. Tye illustrates this point with the following example:

[185] Stalnaker (2003).

> The coin looks round. It also looks tilted—some parts of its facing surface look nearer than other parts of that surface. The experience thus represents the coin as round, as tilted, and so forth. The coin held perpendicular to the line of sight does not look tilted, however. Therefore, an immediate representational difference exists between the two cases. Furthermore, the tilted coin also looks elliptical from the given viewing position. Here the represented feature is that of having a shape that would be occluded by an ellipse placed in a plane perpendicular to the line of sight. Again the representational is nonconceptual. And again, no illusion is present. The experience is veridical on all levels: the facing surface of the coin really is elliptical from here; the coin really is circular.[186]

If we go back to the initial characterization of the veridicality condition which says that perception cannot carry information that x is F unless x is F, in the case of perceiving the coin as elliptical veridicality is guaranteed only if the main features of the information are considered: the causal trace and the proper relation between perceiver and the object perceived. One more general point that follows from such a proposal is that perception, as Noë puts it, "is a way of keeping track of how things are, but it is also a way of keeping track of one's relation to how things are", which means that the causal explanation of the origin of perceptual content is one aspect of perception which he names 'factual' and which tells us how things are in the world, that needs to be supplemented by the second one, the 'perspectival' aspect that includes the relations to how things are from the point of the perceiver.[187] Noë points out that the veridicality of the content can be maintained along both aspects, factual and perspectival, which need not to coincide. This would mean that the representation of the coin as elliptical is veridical from the perspectival aspect, but not from the factual simply because the object in question is not elliptical. We shall return to this distinction again, because I believe it will be helpful in explaining veridicality of the Epicurean content.

After the veridicality feature is explained in more detail, we can conclude by saying that since (i), (ii) and (iii) features of perception cannot be accommodated by conceptual content of judgment it follows that they are two distinct sorts of contents: nonconceptual content of perception in the judgment is interpreted, identified and structured under the concepts, however with an inevitable loss of information. So how does this help us to understand Epicurean content and truthfulness of perceptions? In what follows I will try to show that Epicurean perceptual content meets all of the three features sketched above.

We can start with the fact that in explanation of Epicurus' account of the truthfulness of perception commentators often employ the strategy of illustrating the perceptual system as

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[186] Tye (2002), 79.
[187] Noë (2003), 2.

a recording device or a camera or by the analogy of photography, as in the case of the information delivery systems. So Taylor writes:

> The analogy of the camera is, though anachronistic, quite an apt expression of the Epicurean view. Their thought seems to have been that, like the camera, *aisthesis* cannot lie, since *aisthesis* puts no construction on what it 'sees' nor compares it with what it remembers (DL, loc. cit. *mnēmēs oudemias dektikē*), but, like the camera, merely records what is before it. But it is precisely this passivity in the face of stimulation which gives *aisthesis* its evidential value.[188]

What does this tell us about the content of perception and the way it should be specified? One crucial part of the analogy with the camera is the fact that perception "is irrational and does not accommodate memory" because "neither is it moved by itself, nor when moved by something else is it able to add or subtract anything" (DL X.32, transl. LS). In other words, perceptual content originates as a totally passive response to external stimuli that is not capable of making any intervention on the stimuli. So perception gathers information in the same way as the informational systems described by Dretske and Evans, being causally dependent upon the objects it presents. In the case of Epicurean perceptions those objects, as we have seen, are *eidola* and therefore for a perceptual content to be veridical in the Epicurean case means that the representational content has to accord with the information carried by the *eidola*. That is, in the case of seeing the tower as round, the content of perception is trustworthy in spite of the fact that the tower itself is square because it accurately represents state of affairs, that is, the information about objects in the world carried by the *eidola*. But what is in fact the information carried by the *eidola*? Does the content of perception refer to the state of affairs that can be captured and exhausted by saying only that the tower is round? Obviously not.

In explaining the accuracy and the reliability of perception the content of perception refers to the state of affairs that includes roundness as a property, and the tower to which the property is ascribed, but also the relation between the perceiver and the object perceived, that is, the point of view from which the tower is observed. Having that in mind, the content of perception in the case of perceiving the tower as round has different content from the one that represents the tower as square, but the crucial point is that the contents are not conflicted. They are not in conflict simply because they are about different states of affairs although are causally connected with the same object, the tower. However, the causal history of information includes much more than the object and the relevant property of the object in

[188] Taylor (1980), 119-20.

question as expressed in a proposition 'that the tower is round'. We can say that both perceptions of the tower are truthful representations of states of affairs but only because the content of perception is expanded in order to include *all* information carried by *eidola*. Thus the content of Epicurean perception necessarily includes objects, properties and relations, just as a photograph does, as Dretske claims, which indicates that the representational content of Epicurean perception is rich and replete in a different way than opinions are, as pointed out in the first feature of nonconceptual content. Or to put it in Noë's terms, the content of perception is related to states of affairs, since *eidola* are parts of the world and not some mental entities, and has a factual aspect. I believe that the evidence for ascribing to Epicurus this distinction between the factual and perspectival dimensions of perception is to be found in the *Letter to Pythocles* 91 where Epicurus says the following:

> The size of the sun and the other heavenly bodies relative to us is just as big as it appears. But relative to itself it is either bigger or a bit smaller than it is seen as being, or just the same size. For in our experience too fire-signals, when seen from a distance, are observed in this way by our sense perceptions.

Here Epicurus introduces the difference between what is relative to us (*to pros hemas*) and what is relative to itself (*to kath auto*). Namely, on the one hand the sun perceived relative to us is seen as small and Epicurus claims that "it is just as big as it appears". On the other hand, the sun relative to itself, that is, as a matter of fact can be of a different size. The first construction *to pros hemas* can be taken as the perspectival, because it is relative to the perceiver, while the other, *to kath auto*, since it refers to the factual state of affairs and the way things are in the environment, resembles Noë's factual aspect. Since we have already seen that the mechanism of vision is based on the *eidolic* theory, therefore *eidola* are the objects that carry information that include specific distance and relation between the perceiver and the object perceived, but also the factual information about the way things are. So, let us see how the Epicurean content meets the veridicality condition.

From the perspectival aspect it is rather clear that the representation of the tower as round or the sun from afar is veridical because it traces the truth about the relative point of view of the perceiver. But the crucial point is that the content of the things seen from afar is veridical from the factual aspect because the object that the content has to accord with are *eidola* and not the tower itself. Exactly because of this condition, namely because *eidola* and not the external solids are proper objects of perception, it is possible to explain the truthfulness of all perceptions. Similarly, in the case of hallucinations and all other cases

which are normally understood as misperceptions, both aspects of the content of perception will be veridical since all cases of perception have to match with *eidola* as their objects. This reflects the way Epicurus' epistemology is totally intertwined with his metaphysics: the *eidolic* theory guarantees that perception cannot but accord with its objects and therefore perceptions are always true.

What particularly allows proposed interpretation of the content of perception in Epicurean epistemology is the fact that perception totally passively receives and delivers information, making no room for any intervention or interpretation of the information received. Exactly this point allows an explanation of the difference between perception and opinion and their contents in the way that perceptual is nonconceptual. Perception is, says Epicurus, *alogos* and does not accommodate memory, which I take to rather strongly indicate that perception is a cognitive ability that does not consist in exercising any conceptualization. This means that perception cannot recognize or interpret or structure information in the form of 'that tower is round' because being able to do that necessarily involves sorting out of the input and employing concepts of 'tower' and 'roundness'. That goes beyond perceptual ability because it includes at least the ability to recognize an object as such and such and to conjoin it with the right preconception stored in a memory. So, as Dretske suggests, the Epicurean representational content of perception can be characterized as analog, which in the process of judgment becomes structured and conceptualized or digital.

Finally what does it mean to say that such content of perception is true? What kind of attitude is that? Does it differ from the truthfulness of opinions? Everson explains this issue in the following way:

> Just as the statement 'It is raining' will be true if and only if it is raining, so the perception that it is raining will be true iff it is raining. It is not necessary to postulate propositional items over and above the perception itself for the appraisal of perceptions as true or false to be appropriate.[189]

I take it that according to Everson it is not necessary to say that perception needs to have traditionally understood propositional content, probably consisting of concepts, in order to be characterized as having content that can be evaluated as true or false. The content of perception, as we have seen, can represent the world and it is true, both factually and perspectively, iff it accurately reports the state of affairs. The truthfulness of content of both opinion and perceptions consists in their accurately representing the states of affairs, that is, the external environment. However, it is important that both perception and opinion reveal the

[189] Everson (1990), 169.

truth about the same object in the external world although the proper objects of perception are *eidola*. This is due to the fact that *eidola* inform us about the world because they are causally related with the solids from which they are released. In other words, *eidola* are in fact parts of the solids that, once skimmed off its surface, start to travel to the sensory organ. So, although the proper objects of perception are *eidola* of the tower (in the sense that physical contact of *eidola* and eye produces perception), the content of perception captures the whole causal history of the *eidola* and since the causal chain traces back to an external solid, i.e. the tower, *eidola* thus represent the tower, just as the factual and perspectival aspects of the content explains.

To conclude, the difference between the contents of perception and opinions in representation of the world consists in the fact that perception represents the world in a nonconceptual way, serving as a tribunal of the way things are passively given in perception without any intervention upon stimuli. I believe that taken this way the content of perception can be characterized as purely factual. Exactly the feature of passivity and givenness enables perception to serve as the foundation of cognition, to be self-evident and the criterion of truth. Namely in perceiving subject is not able to intervene in the process, but is passively stimulated from outside, which in the end guarantees validity of all perceptions. In Epicurean terms, the eidolic theory excludes a possibility of any intervention in perceptual content, for which I argued, is the starting point for reading that such content is nonconceptual.

From this we can infer that the opinions will be true if they correctly extract and structure information delivered through the sensory organs by applying correct concepts in order to classify, structure and express the content of perception. The concepts that are applied are Epicurean preconceptions. This reading I believe serves as a good ground for understanding why preconceptions are necessary as the second criterion of truth. Namely, preconceptions originate from a memory of what is often perceived (DL X.33) and enable us to articulate what we see in the form of judgment. Therefore, in order to be able to judge reality, besides perceptions, preconceptions are necessary as the second criterion of truth. In taking that the content of perception is nonconceptual, introduction of preconceptions will thus explain their peculiar function in the Epicurean epistemology which indicates the way conceptualization works in such a system. I believe that this provides a good understanding of the difference between perception and belief, but also leaves a room for preconceptions to explain the link that connects perception and belief.

3. EPICUREAN CRITERIA: PRECONCEPTIONS

Preconception (*prolepsis*) is the second key notion of Epicurean epistemology. The sources suggest[190] that the term was coined and introduced into Hellenistic epistemology by Epicurus himself and after it was taken up by the Stoics it became a standard technical notion of the epistemological debate in that period. However, in spite of the undoubted fact that preconceptions take a significant role in Epicurean epistemology, surviving evidence in Epicurus' own writings is rather short and not very informative when it comes to the explanation of what they are and what their precise function is. Because of this it is necessary to start with the secondary sources instead of Epicurus' own texts. As Diogenes and Cicero report[191] Epicurus lists preconceptions among the criteria of truth, from which we can infer that the main epistemological role of preconceptions is the criterial one: they are supposed to serve, together with perceptions and feelings, as standards for testing the truth of beliefs. But why would Epicurus demand another criterion in addition to perceptions, which as we have seen so far, provide us with incorrigible information about the external world? From what has been said so far about perceptions, it appears that pure appeal to them alone can provide us

[190] Cicero, *ND*, I.44.
[191] DL X.31; Cicero, *Luc*. 46, 142.

with a sufficient standard for acquiring knowledge. So, what is, if there is any, the unique role of preconceptions which makes them a separate criterion of truth? In the discussion I will follow what is taken to be a standard interpretation, according to which preconceptions are derived from perceptions, that is, they are formed empirically. I will argue that to this empiricist reading of the formation of preconception is added a specific epistemological role. Namely, preconceptions serve as an independent criterion of truth because they are the means by which we recognize types of object and as such are fundamental to Epicurus' account of how we gain knowledge of things. Preconceptions are thus criterion for determining what type of thing a particular object is. So in the first part of the chapter I will show the empirical origin of preconceptions and in the second part the analysis of their epistemological function.

3.1. Origin and formation of preconceptions

In order to understand what kind of things in the first place preconceptions are and the way they are established as the criteria of truth, we shall start with Diogenes' report, mostly recognized among scholars[192] as the principal source which provides us with trustworthy summary of Epicurean understanding of preconceptions. Diogenes writes as follows:

> Preconception, they [Epicureans] say, is as it were a cognition [*katalepsis*], or correct opinion, or conception, or universal 'stored notion' (i.e. memory), of that which has frequently become evident externally: e.g. 'Such and such a kind of thing is a man.' For as soon as the word 'man' is uttered, immediately its delineation also comes to mind by means of preconception, since the sense give the lead. Thus what primarily underlies each name is something self-evident. And what we inquire about we would not have inquired about if we had not had prior knowledge of it. For example: 'Is what's standing over there a horse or a cow?' For one must at some time have come to know the form of a horse or that of a cow by means of preconception. Thus preconceptions are self-evident [*enarges*], which is our point of reference when we say, e.g., 'How do we know if this is a man?' (DL X.33, transl. LS 17E, with a small change)

The report as such at first sight seems not to be very helpful, since Diogenes very loosely defines *prolepsis* through the comparison with rather different kinds of things: a perception (*katalepsis*), a correct opinion (*doxa*) and a conception (*ennoia*) or a universal stored notion (*katholike noesis*). As Glidden notices, it seems that Diogenes in his report is

[192] The most severe critique of Diogenes' report as totally mistaken account of Epicurus' doctrine is to be found in DeWitt (1954) comment of the quoted passage. Very shortly, DeWitt objects that Diogenes wrongly ascribe to preconcepotion empirical origin and by that excludes examples of more abstact preconceptions such as 'justice' (*KD* 37,38) or 'god (DL X.123)', which are mentioned by Epicurus himslef as examples of *prolepsis*. In contrast, DeWitt proposes a reading according to which preconceptions are innate, which shall be discussed later.

"painfully groping, looking for the right expression to describe the device". Another thing that is usually objected to Diogenes' presentation is that it is highly influenced by Stoic vocabulary and thus offers a reconstruction of Epicurean theory of preconceptions through Stoic spectacles. Nevertheless, from the passage above we can extract three elements that provide us with a good guidance towards proper interpretation of Epicurean *prolepsis*: first, Diogenes aims to define what *prolepsis* is, than there is an account of the way *prolepsis* is formed and finally, we get an explanation of the epistemic function. In the quoted passage *prolepsis* is defined through identification with "a perception [*katalepsis*], or correct opinion, or conception, or universal 'stored notion' (i.e. memory), of that which has frequently become evident externally". From the word choice it is evident that Diogenes uses terminology which is not a standard Epicurean epistemological term. However, the term needs not to be totally misleading. Namely, *katalepsis* is a common philosophical term used by different schools which indicates an incorrigible mental grasp. In the Stoicism it became a part of a technical terminology that, again, stands for a cognitive state in which the object of cognition is firmly *grasped*, so that a subject, once in a state of cognition, simply cannot be wrong about its object.[193] Diogenes probably uses this the term in its general sense to indicate specific characteristic of Epicureans preconceptions, namely that they denote what is necessarily real, external and evident, that is, an actual thing. To take the example from Diogenes, this means that preconception man necessarily grasp a real shape of a man. This is one of the characteristics preconceptions share with perceptions, for as we have seen previously, perceptions always have a real and external cause, and more importantly, they always accurately represent an external thing. So one possible reading of the passage is to say that Diogenes by using the term *katalepsis* wants to indicate specific features of preconceptions, implied by the meaning of *katalepsis* that became a standard notion in Hellenistic epistemology: first, that they are firm grasps of actual, external things, and second, that they are true and evident.[194] In other words, the preconception man has a real and external cause, the actual shape of a man, which cannot differ from the one given by preconception. Therefore, the common features of preconceptions and perceptions are that they present external world just as it is and they are necessarily related to physical reality. These characteristics, as we shall see later, will be crucial if preconceptions are supposed to have a criterial role in Epicurean epistemology.

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[193] Cf. Cicero, *Acad*. II.145 = LS 41A; SE *M* VII.151-7 = LS 41C

[194] For the suggestion that *katalepsis* here is used in a techical Stoic meaning see Asmis (1984), 62; Grgić (2008), 21.

The criterial role of is indicated by Diogenes comparison of preconceptions with a correct belief. Asmis maintains that by using this expression Diogenes relates Epicurean epistemology now with both Platonic and again Stoic epistemology, in order to emphasize the specific feature of Epicurean epistemology, namely that there is no higher level in cognition than true belief and by that places it within the general context of Greek philosophy. Asmis thus points out that "what makes the description of presumptions [preconceptions] as a right opinion appropriate in the general context of Greek philosophy is that a presumption is a belief that is verified by empirical observation and is not an insight into some general truth that transcends the evidence of perception"[195]. This indicates that just as in the case of perceptions, preconceptions are candidates for self-evidently true things because of their empirical origin. Important point is that the self-evident truth of preconceptions is grounded in the sense-experience and does not go beyond it. And exactly this point is further emphasized in the last expression to which Diogenes identifies preconceptions, namely a conception or a universal stored notion.

This last comparison of preconceptions with universally stored notion reveals the real origin of preconceptions and establishes a reading according to which *prolepsis* is formed in a pure empirical way. In the quoted passage Diogenes states that preconception is a "'stored notion' (i.e. memory), of that which has frequently become evident externally: e.g. 'Such and such a kind of thing is a man.'" So according to Diogenes' report Epicurean theory states that preconceptions are formed through repeated perceptions of individual instances of a particular type of thing. If we take Diogenes' example, this would simply mean that the preconception 'man' will develop in the mind after many observed instances of men.

The way preconceptions are formed is very similar to that of formation of perceptions. In both cases necessarily are included external objects which cause formation of perceptions and preconceptions. The causal relation is of a great importance because, as in the case of perceptions, it serves to secure the truthfulness of preconceptions as well and make them evident (*enarges*). Namely, the causal relation puts preconceptions in a correspondence with the external world and commits them to objective reality. So, one of the reasons for taking preconceptions to be self-evidently true is that they are caused by something external and real. However, another important element that secures self-evidence of preconceptions is that they are *memories* of what is *seen*, that is, they arise from *perceptions* of the external reality, which themselves are self-evident and true. The empirical origin of preconceptions thus implies that

[195] Asmis (1984), 62-3.

they are dependent upon perceptions. In the following passage Cicero nicely captures the idea of preconceptions being dependant upon perceptions:

> For the mind, which is the source of the senses and is even itself identical to the senses, has a natural power it directs at the things by which it is moved. Thus it seizes on some impressions for its immediate use, while storing away others as the source of memory; but it organizes the rest of our impressions by their similarities – and these give rise to our conceptions of things (which the Greeks sometimes call *ennoiai* and sometimes *prolepsis* ['pre-conceptions']). (Cicero, *Acad*. II.30, transl. Brittain)

From Cicero's report we can extract two things. First, we learn that preconceptions are a product of perceptions, and second we learn that the mind has two distinct roles in the process of the formation preconceptions. Before we engage in a discussion of the role of the mind as a processor of perceptions, it is important to point out that here again the mind has a role as if it were the sixth organ. This is so because Epicurus has the same explanation of the formation of preconceptions such as 'cow' or 'horse' or 'centaur'. In all cases preconceptions are created after many individual and similar perceptions of objects of the same class, received via *eidola* which come from outside and strike in the same way both the sense organs and the mind. Without such emanations which produce perceptions, the process of memory could not even start. As Long emphasizes, "to have a *prolepsis* of *p* one must have previously had p-type sensations or feelings and remembered them".[196] Simply, preconceptions are identified with the memory of perceptions of external objects. Therefore, the initial explanation of the formation of preconceptions goes along with Epicurus' empiristic epistemology: preconceptions are built upon direct and immediate perception of external reality. However, within that process the mind has an important role that is not present in the process of perceiving things, that needs to be further explained.

On the grounds of the exact correspondence with the external reality, obtained and guaranteed by perceptions, preconceptions a candidate for the criterion of truth. However, if in preconceptions there is nothing over and above perceptions, what is the reason for naming them the second criterion of truth? In other words, what is the difference between epistemological and criterial role of preconceptions and perceptions? Or as Asmis puts it, "if a preconception is nothing more than a memory, what does the mind contribute to the concept"?[197]

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[196] Long (1971), 119.
[197] Asmis (2009), 87.

Scholars diverge at the answer to this question: on the one side there are those who claim that in fact there is no difference between perceptions and preconceptions because of which preconceptions strictly speaking cannot be taken as the criterion of truth. The most radical stance takes Furley who claims that "the elevation of prolepsis to the position of a third criterion along with sensation and feeling is the work of doxographers, who liked to make systematic lists of terms. Epicurus himself used the word simply to refer to the function of the retained sense image in comparison with new sense perception".[198] Glidden claims that according to Diogenes' report "*prolepsis* is just the memory of those similar experiences, leading to the recognition of natural kinds. And Epicurean prolepsis becomes an extended form of habitual perception, of the sort the empirics later called *empeiria*".[199] However, he concludes saying that preconceptions and perceptions work together, but as a twofold process of the same mental activity – perceiving. In that process, according to Glidden, neither perceptions nor preconceptions give cognitive interpretation of what is seen and preconceptions are just perceptions that have left an imprint, so it appears that there is no apparent difference between the two of them.[200] Rist maintains that in spite of the fact that preconceptions are directly derived from perceptions and are some kind of a form of perceptions, "there is one way in which a general concept [preconception] is a criterion of 'truth' in a different sense from that which applies to sensations".[201] The difference pointed out by Rist is that "while sensations record the existence of objects, general concepts are primarily useful for evaluating the truth of propositions about such existents".[202]

'The evaluation of the truth of propositions about existents', as Rist puts it, points to a different interpretation of the function of preconceptions, in which preconceptions are seen as having rather distinctive features and consequently a different epistemological role from perceptions as the criterion of truth. This difference is explained through the interpretation of the formation of preconceptions in which the mind has a more active role of a processor of perceptions. In other words, the basis is the same, namely repeated perceptions coming from the observed things from the outside, but according to this interpretation not everything is said about the origin of preconceptions if they are simply identified with repeated perceptions of the same sort of things. In Diogenes' passage 33 we are told that universal stored notion

[198] Furley (1967), 206.
[199] Glidden (1985), 186.
[200] I will argue against Glidden's point about preconceptions not giving any cognitive achievement and I will try to show that in fact the main epistemological function of preconceptions is to conceptualize what is given in non-conceptual content of perceptions.
[201] Rist (1972), 29.
[202] Ib., 30.

develops in the mind from a memory of what is often perceived from outside. I suggest that the fact that memory plays a role is a clue for understanding the strict difference between perceptions and preconceptions. In the previous chapter we have seen that one of the characteristics of perceptions that make them incorrigible was that they are *alogos*, that is, incapable of memory. I argued that this primarily means that they are incapable to engage in any kind of interpretation of information carried by *eidola*. In contrast to perceptions now we find that the main feature of preconceptions is that they are connected with memory. This would imply than that they have, unlike perceptions, a feature of being *logikos*. But what kind of feature is that? We can start elucidation with Bailey's composite metaphor which he elaborates in the following way:

> Thus an act of memory is the momentary attention of the mind to an 'image' so preserved in itself, and a mental comparison is the apprehension by the mind of two or more such images side by side. But this is not all, for when, as the result of many individual perceptions of objects of the same class, a series of similar images, is, as it were, heaped one upon another in the mind, the result is a kind of 'composite photograph' of the genus or species: the dissimilarities of the individual images have disappeared, and that which is common to all is retained in what is in fact a 'general concept'.[203]

The crucial words in Bailey's metaphor are memory and attention, since in order to get a 'composite photograph' or preconception, these are the necessary conditions for 'storing' preconceptions. As I already pointed out, I take it that the identification of preconception with memory implies that reason is somehow involved in that process of the formation of preconceptions. The attention in Bailey's passage is the key word to explain what kind of 'reasoning' Epicurus has in mind, implying that there is an active process of the mind in addition to the passive response to the external stimuli in perceiving. The main idea of Bailey's metaphor is that during the process of perceiving we are able to *focus* and *select* images from the continuous flow of *eidola* on the basis of their similarity and produce a 'composite photograph'. The production of a composite photograph is equivalent to the production of a preconception that gathers all repeated perceptions into a universal picture. This is in accordance with Diogenes' passage where he describes preconception as 'universal' thought (*katholike noesis*). The point of Bailey's metaphor, as I see it, is to highlight the process of generalization, that is, the process in which common features of entities of the same type are recognized and labeled. That general label we attach to them is preconception.

However, as Asmis points out, we need to be cautious and not identify Epicurean preconceptions with Aristotelian recognition of the essence of the things or "indeed any type

[203] Bailey (1928), 245.

of universal entity which is not an accumulation of individual perceptual impressions".[204] This is important because Epicurus' preconceptions are in spite of their generality, still only memories of perceptions coming from outside. Given this it is in accordance with Epicurus' theory to claim that we can have preconception of any entity which is built upon gathered individual perceptions of such an entity, for example, Plato, and not only some typical general notions such as man or cow. Again, this suggests that Epicurus is consistent in his empirical tendencies to secure a direct connection with the external reality and, more importantly, an exact match of preconceptions with the things to which they refer. Sedley takes this to be a fundamental principle for the Epicureans: "the preconception (*prolepsis*, '*notities'*) of a thing cannot exist unless the thing already exists".[205] This, of course, does not commit Epicurus to the claim that there is an existing entity of every preconception we could possibly think of, such as centaur or the Furies. As we have previously seen, Epicurus' theory of perception explains that *eidola,* i.e. the immediate causes of perception, need not to be formed only in the process of skimming of the surface of solids, but also in the mid-air and as such they enter the mind directly, which in that case acts as a sense organ. A frequent perception of a centaur results with a preconception, which correspond to the external reality (*eidola* are parts of external world of which perceptions are true), but this does not imply that centaur necessarily exists.[206] Another important part of Epicurus' epistemology is a sharp distinction of the content of preconceptions from the added judgment which is not anymore a preconception, but simply a false belief.[207] The similar strategy Epicurus adopts for perceptions, claiming that the apparent illusions expressed in a propositional attitude do not express perceptual content but has an added element of interpretation that forms a false belief. The distinction between preconceptions and perceptions from false beliefs we shall leave for a separate chapter dedicated to Epicurus' methodology of testing beliefs.

So Epicurus' explanation of the empirical origin of preconception reflects his affinity towards a naturalistic approach of cognitive achievements that he has in common with Aristotle and the Stoics.[208] But as Asmis observes, there is a significant difference between Epicurus and their views. Asmis explains the difference in the following way:

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[204] Asmis (1984), 63.
[205] Sedley (1973), 19.
[206] This is a problem for Epicurus' theory, namely the problem of discrimination of the content of preconception and what is added to the content, which shall be discussed later.
[207] This becomes particularly important for more complex preconceptions in which the content is richer and does not follow simply from the observation of similar things, but involves more delicate operations of the mind, which shall be discussed later.
[208] See Aristotel, *Metaphysics* 980b28-81a12; *An. Po.* 100a3-9; for the Stoics see Aetius 4.11.1-4 (LS 39E)

Aristotle and the Stoics distinguished memory from concept formation as a prior stage of cognition. According to them, memory precedes experience (*empeiria*), which consists of a multitude of memories of the same type, and experience in turn precedes the formation of a single, universal concept out of this multitude memories.[209]

So the difference pointed out in the quoted passage is that, while Aristotle and the Stoics distinguished two stages of cognition (experience and concept formation), Epicurus looped them together and recognize only one universal stage. To put it simply, Aristotle and the Stoics recognize in the process of conceptualization initial stage within which similar perceptions are accumulated and the second phase, the stage of recognition of the universal truths. What correspond to the second stage in Epicurus' view is attention of the mind to the specific *eidola* of such and such kind (e.g. of a horse; the simple process of perceiving), then a successive selection and recognition of similarities within perceived *instances* (after the process of receiving of many individual perceptions of a horse follows recognition of a similar pattern in their content), gathering and storing of recollected similarities as similarities of a certain general *type* to which all these perceived instances belong (a stage of formation of a preconception 'horse' on the basis of fixed pattern all perceptions of horses has in common; this is what Bailey recognizes as the creation of 'the genus or species' in the 'composite metaphor'). So, in Aristotle and the Stoics the levels of formation of concepts is distinguished from the level of gathering of memories of perceived particular objects because in the former there is an element of reasoning that reflects recognition of specific universal elements and patterns in what is observed. In other words, that stage goes beyond pure empirical framework based only on what is perceived. However, in Epicurus' view these levels are not separated. Nevertheless, evidences strongly suggests that in the process of formation of preconceptions the mind is active both as the sixth sense organ, but also in the process of reflection upon the perceptions. As Asmis points out, "on the Epicurean view, the mind remembers not only just many similarities of the same type, but complex relationships of similarities and differences; and this awareness results in the formation of a single concept".[210] So from what has been said it appears that the role of the mind in the formation of preconception is rather emphatic.

The element of inference in the formation of preconceptions is reported by other ancient writers. The first hint, as I already pointed out, was given by Diogenes' text that the memory is *logos*, as opposed to *alogos* perceptions. Next, Clement reports that preconception is "a focusing (*epibole*) to something evident (*enarges*)",[211] and Cicero, explaining the

[209] Asmis (2009), 89.
[210] Asmis (2009), 89.
[211] Clem. Alex. *Strom.* II.4 (Us. 255)

formation of preconception of god, says that "our mind, when its attention (focusing, *intenta*) is fixed on these forms, conceives the divine nature to be happy and eternal"[212] [that is the content of preconception of god]. What we find here is that the main thought process with which preconceptions are associated is focusing of the mind (*epibole tes dianoias*). Previously we have shown that *epibole* is not only associated with the mind but also with the sense organs (*epibole ton aistheterion*) and it served for the explanation of the activity of the sense organ or the mind (when it function as the sense organ) in the internal process of perception, namely in the concentration upon particular *eidola* among an infinite numbers of other. But here we see that *epibole* has another function particularly for the role of the mind. Sedley claims that "the chief function of the *epibole tes dianoias* must be in the field of memory", but also adds that the objectivity of the empirical foundation of knowledge is "rescued by the assurance that the mind, like the sense-organs, draws its images from outside". From the perspective of the atomistic theory, Sedley continues his explanation saying that "the images of memory have easier access to the mind, and thus occur to it with greater clarity and consistency, than those of mere imagination; and perhaps also that the original visual image of an object imprints its pattern in the atoms of the mind in such a way that memory-images of the same object immediately 'lock in' to it and are thus identified".[213]

Although Sedley is not directly talking about preconceptions here, I take it that these modifications of the atoms in the mind which become 'locked in' imprints are in fact preconceptions explained within atomistic framework.[214] But in order to be able to do that, as Glidden emphasizes, "*epibole tes dianoias* and *prolepsis* seem to require something more than just the passive presentation of fantastic material – namely they both seem to require the organization of that material into something recognizable, organization achieved by the active intervention of the mind".[215] The problem that Epicurus' theory is facing now that it found itself on the seesaw between rationalism and empiricism, more precisely at the point in which it appears that the apprehension of the universality of certain patterns in cognition cannot be explained in a purely empiricist way.[216] Epicurus' theory thus has to resolve the general

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[212] Cicero, *ND* I.105
[213] Sedely (1973), 23-4.
[214] Similar atomistic explanation is given by Diogenes of Oenoanda: "What is viewed by the eyesight is inherited by the soul, and after the impingements of the original images passages are opened up in us in such a way that, even when the objects which we originally saw are no longer present, our mind admits likeness of the original objects." (New fragment 5.5.5-14 = LS 15E)
[215] Glidden (1985), 191.
[216] For the similar problem of the apparent tension between empiricims and rationalism see Aristotle, *An. Post.* II.19

problem: an apparent tension between these two conflicting directions, empiricist and rationalist, in the explanation of the formation of preconceptions.

Epicurean technical term for this kind of the epistemological process in which the mind is engaged in an interpretative intervention upon raw perceptual material that yields preconception is called *epilogismos*, which Sedley translates as 'empirical reasoning'.[217] It is important to notice Sedley's emphasis in translation that the inferential process is empirical one, which signifies the solution of the apparent conflict between empiricism and rationalism in Epicurus' theory. The reason for taking *epilogismos* to be empirical reasoning Asmis explains as follows:

> The act of *epilogismos*, 'calculation' of the phenomena, it turns out, is nothing other than the act of attending to the differences and similarities among the appearances. It consists of taking account of what appears from outside, just as a calculator or computer or accountant would do. There is an act of inference; but it consists of simply recognizing connections that are given.[218]

Epicurus' empiricism is grounded on the fact that the starting point of the formation of preconceptions is memory, which in the atomistic framework works as a process of a systematic and continuous flow of *eidola* leaving successive imprints, that is, atomic modifications in the mind. The memory, however, includes process of sorting out perceptual information, *epilogismos*, which results with the stage of general recognition of similar patterns in perceptions. But the level of generality does not go beyond what is given in perceptual content which means, as Asmis puts it, that "there is no universal entity distinct from the many particulars that have appeared".[219] So it seems that unlike Aristotle, Epicurus wants to preserve the idea that the process of the formation of preconceptions is the natural process based purely on sensory experience and memory, and to avoid introducing some specific cognitive capacity for grasping universal truths and principles (*nous* in Aristotle). He wants to claim that e*pibole tes dianoia* is an activity of mind, but in contrast to *nous*, it works as an mechanical operator upon the sensory material without any additional insights besides the general characteristics of particular type of an entity that are perceived as similar from one instance to another. So for Epicurus these proleptic generalizations are acquired in an essentially automatic and natural process in which we produce general 'outlines' (*tupoi*) or

[217] For an extended discussion of the term see for example Sedley (1973), 27-34. The notion *epilogismos* shall be discussed in the last chapter as part of the discussion on the Epicurean scientific methodology.
[218] Asmis (2009), 90. The notion *epilogismos* shall be discussed in the last chapter as part of the discussion on the Epicurean scientific methodology.
[219] Asmis (1984), 64.

'sketches' (*hupographe*)[220] of the perceived things from outside. The process of derivation of preconceptions from perceptions consists of "incidence [*periptosin*, actual contact, encountering], analogy, similarity, and combination, with some contribution by calculation [*logosmou*]". (DL X.32, transl. Asmis) This way of fourfold analysis of the formation of conception, as Asmis points out, is not originally Epicurean, but they "seem to have borrowed their analysis from other philosophers".[221] She supports her interpretation by Sextus' report in which he maintains that every conception (*epinoias*) must be preceded by the sense experience so "generally it is impossible to find anything to do with conception that one does not have for oneself as something known by way of experience". [222] (SE *M* VIII.60, transl. Bett) Examples Sextus provides us with are the following: for an actual contact we acquire preconceptions of all properties of bodies, such as white, black, sweet and bitter; through analogy with observable objects we think of Cyclops (by mental enlargement of human being) or pigmy (by mental diminution of human being); through similarity with already observed things, such as Socrates, we think of him when he is not present; and by composition or combination of perceived objects we form a preconception of centaur.

The fourfold division of the formation of preconceptions strongly suggests another important difference between perceptions and preconceptions, namely unlike perceptions, preconceptions differs in respect of their complexity. In Epicurus own writings we do not find much on the formation of preconceptions, but from a quite detailed metaphysical analysis of the properties, of which some are essential to the body (*sumbebekota*) and some belong to the body accidentally (*sumptomata*), we may conclude that preconceptions of properties are the most basic ones. (DL X.68-70)

The metaphysical analysis of the properties starts from the fact that properties are observed, which is closely related to the explanation of the origin of preconceptions as purely empirical generalizations of things *perceived* from outside. In the opening sentence of the passage 68 of the *Letter to Herodotus* Epicurus specifies first type of the properties, namely permanent properties, such as size, shape, weight and color. These properties are essential to body as such, being necessary accompaniments of it, as opposed to accidental properties which are characteristics a body just happens to have, but separable from the body itself without danger for the body to lose its permanent nature. As it is explained later in the text, the criterion for distinguishing between the two types of properties is the following: a

[220] See DL X.134.
[221] Asmis (1984), 66.
[222] Cf. *M* XI.250-2.

property is permanent or essential or inseparable property of the body if we cannot conceive the body without it, and accidental if body is conceivable without it, or as Glidden puts it, "Epicurus is saying […] that for something to be the thing it naturally is certain sorts of properties must belong to it, all of which together give that body its abiding nature".[223] Given this, the epistemological function of preconceptions is already indicated: they help us to identify and to taxonomize bodies as such and such body.

In Epicurus' view we acquire the body's own and permanent nature through its properties, which are directly accessible to us, both through the process of sense perception for observable bodies, and through analogy with observable bodies in the case of the nature of invisible things, i.e. atoms and void. Properties are conceived of because, as Epicurus explains they "have all their own individual ways of being focused on (*epibolas*) and distinguished, yet with the whole complex accompanying them and at no point separated from them, but with the body receiving its predication according to the complex conception". (DL X.69, transl. LS) Perception tells us that fire is *hot*, or that a certain visible body, say an apple is *red*. What we get here is the explanation of preconception as "a generic notion of any type of object of experience" which is "synthesized out of repeated experiences of something external".[224] In that process we recognize properties as properties of bodies, hotness belonging to the fire, as well as color to the apple, in the sense that they are inseparable from the body, as body's necessary accompaniments. This means that if we remove such a property from the body, it no longer will remain the same body, loosing its own permanent nature. For Epicurus fire without hotness is no longer fire, just like apple without color is no longer a visible body. Leaving aside more complex analysis of the metaphysics of properties, the point I want to make is the following. Preconceptions of properties are straightforwardly formed through sense perceptions by an act of focusing (*epibole*). In addition to this direct response to observations, preconceptions of properties reflect recognition of certain regularities in observed phenomena obtained by an additional act of the mind. That is, in the next step we observe that hotness always accompanies fire, on the basis of which we form the preconception of fire. Exactly this is what makes a difference between perceptions and preconceptions, providing us with a direction towards the main epistemological function of *prolepseis*. In my view, their function is to organize and conceptualize unsorted and raw perceptual content, which as I previously argued, is nonconceptual. So if we take the example of perceiving someone, to say "This is man" is to interpret perceptual content by classifying it

[223] Glidden (1985), 208.
[224] LS, 17.

under particular preconception, man. In other words, formation of belief is a joint act of perception and application of preconception in which perception supplies us with the material that becomes organized by preconceptions. Although Glidden does not advocate this kind of a difference, specifically arguing that there is no any cognitive element neither in perceptions nor in preconceptions, he claims the following:

> *Prolēpsis* would then seem to organize *phainomena* in two different ways, depending on whether the *phainomena* observed are *sumbebēkota* or *sumptomata*. The one yields *prolēpsis* of natural kinds. The other yields *prolēpsis* of encompassing persistent conditions, regularities pervading the *phainomena* without coming to identify at the level of appearances natural sorts of atomic conglomerates.[225]

So what is puzzling is that Glidden is also talking about certain generalizations that come out of from one perceived instance to another, but he is not willing to accept that this is a cognitive process. But that *prolepsis* have cognitive aspect seems to be indicated by the fact that Epicurus coined the term prolepsis which etymological root, as Furley points out, is the word *lepsis* meaning "conception" or "comprehension".[226] Asmis writes that "literally, a prolepsis is a '*grasp*' that has been obtained before an inquiry".[227] In Asmis' quotation is indicated Epicurus' motivation for introducing prolepsis as the second criterion of truth, which shall be further discussed in a chapter that follows. For the present purposes it is enough to say that in Epicurus' view a preconception is an epistemological requirement for an inquiry and as such need to be a generalization or an abstraction derived from perceptual experience. In my opinion the fact, upon all scholars agree, that the formation of preconceptions is a result of a mental process of finding out connections and regular patterns within the content of perception, indicates that this is a higher level of cognition than the one we have in perceiving, precisely because of recognition of general features of perceived entities. This is what makes preconceptions different from perceptions and the reason why perceptions are *alogos* and preconception *logos*.

So if we go back to the analysis of properties, this would mean that the basic grasp we get by preconceptions are those of properties because they are formed through the direct contact with the external reality. Next, on the basis of repeated perceptions of specific property, accompanied by certain shape, such as 'hot' and 'fire-shape', we form a preconception of a natural kind, fire. I agree with Asmis[228] who maintains that there are

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[225] Glidden (1985), 210.
[226] Furley (1967), 203.
[227] Asmis (1984), 22
[228] Asmis (2009), 86-7

different groups of preconceptions ranging from the basic one, such as preconceptions of properties, to the more complex of natural kinds, such as 'horse', 'man', 'cow'[229], to the most complex such as 'justice'[230], 'cause'[231] and 'god'[232]. Asmis concludes the analysis saying the following:

> The mind forms a preconception by gathering similar appearances; and this process seems increasingly complex. To sort out the salient features of 'cow' for example, the mind gathers a selected number of perceived similarities into a single conception. In the last group, the mind draws connections involving several preconceptions. The preconception of 'justice', for example, is 'what is beneficial in communal dealings with one another'; and this is an evaluative judgment involving at least the preconceptions of benefit and community.[233]

The complexity of the last group of preconceptions, such as 'justice', opens a question of what kind of things then preconceptions are. Namely, are they mental pictures or outlines (*tupoi*), as it is suggested by Diogenes in 33, or they should be considered as certain propositions? Diogenes' suggestions is more compatible with pure empiristic tendencies in Epicurean understanding of the formation of preconceptions, so it fits rather nicely to think of preconception of natural kinds as 'outlines' or 'images' automatically formed through systematically repeated perceptions as imprints in the mind. The problem appears with more complex preconceptions, such as justice, to which we cannot associate some mental image. But the reason for this is exactly the fact that preconception 'justice' is not formed, as we have seen, through direct observation and focusing of mind (*epibole*), as in the case of basic *prolepsis*, but is developed through a more complex process of linking together other preconceptions, and as such appears to be closer to a judgment with the propositional content 'justice is the utility of social relationships'.[234] So the difference in their formation suggests that all preconceptions need not be understood in the same way, exclusively either as images or propositions. Striker similarly maintains that "insofar as *prolepseis* are 'seen', it is natural to conceive of them as images; but insofar as they can be described as demonstrated or indemonstrable, we have to understand them as propositions".[235] The incorrigibility of preconceptions as propositions is guaranteed by the fact that they are all derived from perceptions. And in that sense all preconceptions, being derivates of perceptions, are

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[229] Examples mentioned in DL X.33.
[230] *KD* XXXVI-XXXVIII
[231] Epicurus, *On Nature XXVIII*, in Sedley (1983).
[232] DL X.123-4; Cicero *ND* I.43-6.
[233] Asmis (2009), 87-8.
[234] For a discussion of the notion of justice within Epicurean ethics see for example LS 22.
[235] Striker (1996), 41. To this problem I shall return later because taken as propositions, *prolepseis* are very similar to definitions. However, this opens a problem because Epicurus is known for his rejection of definitions.

dependant upon them and secondary criterion of truth, which in the end grants that in their content there is nothing over and above what is given in perception and thus secures them empirical origin.

An obvious objection to the proposed reading questions the empirical origin of preconceptions on the grounds that the amount of reasoning within the process of their formation highly exceeds the role of the senses. Epicurus is facing a general problem of any empiricist theory of the concept formation: how much of reasoning is too much for empiricism? Epicureans, as any other empiricist, in their response do not have a lot of space for maneuvering, but to claim that in the process of delivering of complex preconception the reason necessarily relies upon sense experience and therefore, technically there is no any genuine direct and independent insight of reason within the preconception formation. The idea of the reason being subordinated to perception is well established in Epicurean thought and supported by different sources and it was part of the argument for the claim that there is no criterion higher than perceptions. Next, the Epicurean understanding of human cognition is deeply naturalistic, so the process of preconception formation should be seen as an automatic response to external outcomes and natural cognitive process of finding regularities within observable features of the world. In that sense all *prolepses*, even 'justice', are formed by experience where the act of the mind is reduced to the already quoted Asmis' metaphor of "a calculator or a computer or accountant". In my opinion the metaphor works because there is no rationally causal demonstration of the development of preconception that actually exceeds what is given in perception. Any such inferential process would be a serious threat for using preconceptions as the criterion of truth.

However, the most serious objection for the empirical reading of the preconception formation is the preconception of 'god'. This preconception is discussed in Epicurus' own writings, but the text that has produced the most puzzlement is Cicero's report in *On nature of gods*. Although this is primarily argument for the existence of gods, the report is relevant for our purposes: it puts in doubt the empirical interpretation of the origin of preconception in two aspects. First, Cicero says that the preconception of the god is *innata*, which translated literally as 'innate' directly contradict empirical reading; and second, the formation of the preconception of the god in Cicero's report suggests that the preconception, as *innata*, is just a thought or mental construction not originated from an existing object, which again override empirical interpretation for the sake of rationalism.

Cicero reports Epicurus' position through the mouth of the Epicurean spokesman Velleius, in the following way:

For he [Epicurus] alone saw, first, that the gods existed, because nature herself had imprinted the conception of them in all men's minds. For what human nation or race does not have, without instruction, some preconception of the gods? Epicurus' word for this is *prolēpsis*, that is what we may call delineation of a thing, preconceived by the mind, without which understanding, inquiry and discussion are impossible. The power and value of this reasoning we have learnt from Epicurus' heaven-sent book on the yardstick and criterion. Thus you see the foundation of this inquiry admirably laid. For since the belief has not been established by any convention, custom or law, and retains unanimous consent, it must necessarily be understood that there are gods, given that we have ingrained, or rather innate knowledge of them. But that on which all men's nature agrees must necessarily be true. Therefore it must be conceded that there are gods. Since this is agreed among virtually all – the uneducated, as well as philosophers – let us allow the following to be agreed: that what I called our preconception, or prenotion, of the gods (for new things require new names, just as Epicurus himself gave *prolēpsis* its name, a name which no one had previously applied to it) is such that we think the gods blessed and immortal. For as well as giving us delineation of the gods themselves, nature has also engraved on our minds the view of them as everlasting and blessed. Therefore Epicurus' well-known maxim [= *Key doctrine* I] outs it rightly: 'That which is blessed and imperishable neither suffers nor inflicts trouble, and therefore is affected neither by anger nor by favour. For all such things are marks of weakness.' […] …the force and nature of the gods is of such a kind that it is, primarily viewed not by sensation but by the mind, possessing neither the kind of solidity nor the numerical distinctness of those things which because of their concreteness he calls *steremnia*; but as we apprehend images by their similarity and by a process of transition, since an endless series of extremely similar images arises from the countless atoms and flows to the gods, and that our mind, by focusing intently on those images with the greatest feelings of pleasure, gains an understanding of what a blessed and everlasting nature is. (*ND* I.43-9, transl. LS 23E)

The first controversy with Cicero's report is that he says that the knowledge of preconceptions is innate (*innata*). DeWitt proposes this translation and uses it as one of the main arguments in order to show that Epicurus is not an empiricist.[236] He writes that the major confusion for a proper understanding of the formation of preconceptions is produced by Diogenes whose report he completely disregard as "a hodgepodge of Epicurean and Stoic terminology and doctrine". He claims that preconceptions are anticipations, and "if an idea precedes or anticipates something, this can hardly be anything but experience. The said idea must therefore be innate." However, DeWitt's position nowadays is completely abandoned and scholars agree that Cicero's usage of *innata* should not be taken to stand for the *innate origin* of preconceptions. The reason for this lies in the fact that Vellius in Cicero's report presents formation of the preconception of god through dichotomy between nature and convention (or teaching), as we can see form the first two sentences of the quoted passage. With regard to this distinction, preconceptions are *innata* in the sense that they are produced empirically, but through the process of a repeated impact of the external objects. This reflects one important feature of Epicurean epistemology indicated by Valleius' claim that "*all people* have some preconception of god", namely naturalism. The kind of naturalism we can ascribe

[236] DeWitt (1954), 144.

to Epicurus starts from the fact that the process of preconception formation is seen as a part of our natural cognitive make up, which Asmis explains as "a response of human nature [to the external environment], developed from within an individual"[237], that is, preconceptions "are naturally implemented from outside; and this is what distinguishes them from customs, conventions, and laws, which are taught".[238] So the first controversy is solved. The preconceptions of the gods are not innate. However, the second controversy is a more complex one, since the textual evidence of the process of how we acquire the preconception of god opens two equally possible explanations: either it is obtained through accumulation of the same perceptions of actually existing gods or through some other inferential process which need not to start from the real god figures. The second explanation then opens the problem whether the preconception of the gods is a mental construct, and as such incompatible with the empiricist reading I advocated so far.

According to the first, more traditional reading[239], the preconception of the gods is formed through the repeated perceptions of the external things, in the same manner as reported by Diogenes. According to this interpretation, the mind receives images (*eidola*) in sleep by focusing (*epibole*), because the gods are made of the atoms of an exceptional fineness which normally cannot strike the other sense organs.[240] The reading is supported by Lucretius who writes that "the races of mortal men used to see with waking mind, and even more so in their dreams, figures of gods, of marvelous appearance and prodigious size".[241] However, this alone is not enough to form a full preconception of the gods as blessed and immortal, so Lucretius then explains that attributes are formed on the basis of inferences: first, from the constant supply of similar images they infer to the gods' immortality, and second, from the fact that the gods show no fear and perform marvelous acts, the gods are blessed. Lucretius' report seems rather dubious. O'Keefe lists two groups of possible objection to this kind of reading he labels 'realist': (i) according to atomistic theory, all compound bodies will eventually apart because they have void in it; (ii) god having human shape is incompatible with Epicurus' claim that they live in outer space, because human shape is a product of the adoption in the specific environment.[242]

On a different reading, proposed by Long and Sedley, the preconceptions of the gods are not formed by repeated mind perceptions of images of gods, but of humans. According to

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[237] Asmis (1984), 69.
[238] Asmis (1999), 279. Cf. Scott (1995), 198-201.
[239] Bailey (1928), Asmis (1984), Scott (1995).
[240] For a detailed analysis of the kind of bodies the gods have see Bailey (1928), 449-461.
[241] Lucretius, *DRN* V.1170-72; Cf. *ND* I.144.
[242] O'Keefe (2010), 157-8.

their view we move from the impressions of human being to the impression of god by a process of transition (*metabasis*), as mentioned in the cited Cicero's passage. Helpful evidence in favor of their view comes from Sextus who explains Epicurean position in the following way:

> The same reply can be made to Epicurus' belief that the idea of gods arose from dream impressions of human-shaped images. […] And it will be possible to reply to all the doctrines we have listed that man's idea of god is not based on mere largeness in human-shaped anima, but includes his being blessed and imperishable and wielding the greatest power in the world. But from what origin, or how, these thoughts occurred among the first men to draw a conception of god, is not explained by those who attribute the cause to dream impressions and to the orderly motion of the heavenly bodies. To this they reply that the idea of god's existence originated from appearances in dreams, or from the world phenomena, but that the idea of god's being everlasting and imperishable and perfect in happiness arose through a process of transition from men. For just as we acquired the idea of a Cyclops . . . by enlarging the common man in our impression of him, so too we have started with the idea of a happy man, blessed with his full complement of goods, then intensified these features into the idea of god, their supreme fulfillment. (SE, *M* IX.43-7, transl. LS 36C)

Long and Sedley take that 'human-shaped images' from the first sentence of the quoted passage are not images coming from the actually existing gods, but of human beings. The explanation of preconception-formation then runs as follows: the preconception of the gods is formed through the process of transition from an idealized human being, as 'happy man, blessed with his full complement of goods' to whom those attributes are enlarged to the maximum. Therefore, "gods, like giants, are thought construct"[243], formed in the same way: a giant through the process of intensifying the notion of human being and gods by enlarging the notion of a perfectly happy and blessed man. The gods are then not solids, but thought construction of the intensified idea of the ideally happy man that live endlessly long. Two things are important to emphasize. First, this process of inference (transition, *metabasis*) is automatic and natural and as such perfectly compatible with empiricist reading I advocated so far. Namely, in the process of transition there is no causal chain of demonstration from specific premises to the conclusion, but the process of intensifying happens rather instantly as a part of our natural and inevitable process of cognition. Second, we need to keep in mind that the labeling of the preconception of the gods as a 'thought construction' does not imply idealism, but just the opposite: images of gods formed in this way are normal way of production of images in dreams, which are again atomic bodies, but unlike horses and cows, gods are not emitted from the surface of the solid objects.[244] According to Epicurus' account

[243] LS, 145.
[244] Cicero in *ND* I.47-8 writes that Epicureans claim that the gods do not have body but 'quasi-body' and do not have blood but 'quasi-blood'.

of perception, as we have seen, the mind functions also as the sixth sense organ producing images in dreams and receives these effluences, which produces true perceptions exactly because they have an external corporeal cause, atomic image (*eidolon*) to which they perfectly match. However, Asmis poses an interesting question: how do the perceptions of the gods differ from mental appearances of Centaurs, flying horses, of Furies? One answer is they do not, because a perception of Centaur as we have seen is true, as it accurately represents its cause – eidolon of Centaur. However, the puzzling part is the evidence that Epicurus maintains the god's existence in much stronger way than that of Centaur, namely in a literal sense of 'exist', and not as in the case of Centaur in which he refers only to existence of the Centaur-shaped *eidola*. Asmis claims that the actual existence of the gods is indicated by what Epicurus takes to be 'common notion' god, saying the following:

> There is some evidence that common preconceptions may be relied upon to show objective existence. In the *Letter to Menoeceus* (123), Epicurus demands that one must think of god just as is shown by 'common notion'. One must preserve this conception without adding incompatible attributes; 'for gods exist; for knowledge of them is evident (enarges)'. It seems implausible to take 'exist' in anything but the ordinary sense of 'exist' – that is, the gods exist not just in our minds, but objectively.[245]

However, Asmis' explanation is not very convincing. It is true that we can take this as a traditional realist interpretation and claim that the existence in question is literal existence so that the gods are in fact solids (*steremnia*), which consequently opens a problem for Long and Sedley's interpretation. However, Epicurus' claim that the knowledge of the gods is evident (*enarges*) is perfectly compatible with the reading according to which the gods are in fact products of streams of images, just as the perception of Centaur is as much as *enarges* as perception of a solid body. In regards of the preconception of the god as a 'common notion', as Rist points out, "we mean not a concept held by all, but a concept of the most basic features of the objects conceived".[246] And that is what is conceived through the process of transition from idealized human being to the preconception of the god. Finally, Epicurus' pushing to the side of a literal god's existence should be considered, as Long and Sedley put it, through the fact that "even within Epicurus' own society it was normal practice for intellectuals to accept the teachings of traditional religion as symbolic rather than literal truths".

Therefore, we can conclude the analysis of the origin of the preconception in the following way. Preconceptions are formed empirically, through accumulation of similar

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[245] Asmis (2009), 91. However, it should be pointed out that the part of the 'common notion' of god is false supposition that the gods intefer in human affiars. It seems to me that this is s problem for Asmis' reading of 'common', because of which I turn to Rist's reading, explained in the text bellow.
[246] Rist (1972), 26.

perceptions. That process can be direct, from perception to preconception, based only on repeated perceptions, as in the case of the most basic preconceptions, such as preconceptions of properties. Formation of the more complex preconceptions involves the process in which the mind has more emphatic function, that is, the process of 'direct contact, analogy, similarity, and combination'. All these process are inferential, but we need not to be reluctant to accept it as a part of empiricist reading of the origin of the preconceptions. This is so, because Epicurus does not recognize any purely rational causal explanations in such processes but rather takes them to be automatic responses of our cognitive nature to the external stimuli. The inferential process proceeds from what is evident, and thus guarantees the truth of preconceptions. This brings us to the analysis of the epistemological function of prolepsis. So far we have seen that the function is based on a distinctive character of preconceptions as memories of what is perceived from outside and tat it consists in the identifications of regularities in the content of perception. I labeled this as a conceptualization of the nonconceptual content of perception. The second epistemological role of preconception is to serve as the criterion of truth. In the next section we shall discuss these functions more carefully.

3.2 The role of preconceptions

The first epistemological role of preconceptions becomes apparent through the explanation of their origin. As I have argued, the empirical origin of preconceptions shows that for Epicurus *prolepseis* are fixed patterns of the external things, imprinted and processed by the mind. From the origin we infer that the main function of preconceptions is to classify and identify perceptual content, which is widely accepted among the scholars as an uncontroversial interpretation. In this manner Bailey maintains that "we are not left with the series of detached unmeaning sensations, but are enabled to correlate them, to identify and distinguish".[247] Long says that "*one* visual sensation, however clear, cannot by itself establish *what* something is".[248] In other words, in order to say 'that tower is square or round', we already need to have preconceptions of 'tower', 'round' and 'square' to which we can associate present perceptual content and by that arrange 'detached unmeaning sensations'. However, I argued that exactly this suggests that preconceptions are involved in conceptualization of nonconceptual perceptual content. My previous argumentation was based

[247] Bailey (1926), 247.
[248] Long (1971), 120.

on the secondary sources, because Epicurus' own writings are not helpful for the explanation of the way preconceptions are formed. But we find enough evidence for the elucidation of the epistemological function Epicurus assigned to them. The key evidence is Epicurus text from the *Letter to Herodotus* in which he says the following:

> First, Herodotus, we must grasp [*eilephenai*] the things which underlie words [*ta hypotetagmena tois phtongois*], so that we may have them as a reference point against which to judge matters of opinion, inquiry and puzzlement, and not have everything undiscriminated for ourselves as we attempt infinite chains of proofs, or have words which are empty. For the primary concept corresponding to each word must be seen and need no additional proof, if we are going to have a reference point for matters of inquiry, puzzlement and opinion. (DL X 37, transl LS 17C)

The passage is extremely difficult and the first obstacle is the fact that Epicurus does not mention *prolepsis* in it. So the first task is to determine whether the passage is about preconceptions. Scholars are almost unified over the fact that there is a firm ground for assuming that Epicurus in the passage talks about preconceptions because of the linguistic parallelism with Diogenes report in 33.[249] The parallelism consists of the following elements: (i) in 33 Diogenes says that *prolepsis* underlies utterances, and here we find that there are 'things which underlie language; (ii) in 33 we are told that *prolepsis primarily* underlies utterances, and in her in 37 Epicurus called the concepts '*primary'*; (iii) in the quoted passage above Epicurus says that preconceptions must be 'seen' (*blepesthai*) which is the same verb used in 72 with preconception. So, we can rather firmly conclude that 'things which underlie words' (*ta hypotetagmena tois phtongois*) are preconceptions.

Nevertheless, the proper understanding of the expression 'things which underlie words' still is vague. Namely, what exactly does Epicurus mean when he says the *prolepses* are subordinated to the utterances? The general impression we get at the first glance from the quoted passage is that Epicurus takes that the 'things which underlie words' are some kind of prerequisite and starting point for the understanding and judging. Otherwise everything will remain unknown because first, the demonstration will go endlessly and second, we will have 'empty words'. So it is clear that Epicurus is trying to block some kind of regress argument by postulating something that is prior to any cognition, ascribing thus to *prolepsis* both a function of a starting point in an inquiry and the criterial function. But the fact that the failure of grasping preconceptions as a result has the 'empty words' is particularly significant. Striker clarifies the emptiness of words saying that "if we have not grasped the meanings of the

[249] Glidden (1985) is the exception to the standard reading of this passage as one about preconceptions. For standrad view see Striker (1996), Asmis (1984), LS, Scott (1995).

words we use, we do not know what we are talking about and thus utter only meaningless words or involve ourselves in contradiction"[250]. Striker finds it quite uncontroversial to associate preconceptions with the meanings of the words, which in the end perfectly makes sense of the expression with which we start, 'things which underlie words'. Things that are subordinated to our utterances are meanings, which must be grasped in advance if any judging or inquiry is to be made. Although I completely agree with commentators who take that the most natural reading is to say that preconceptions are meanings of the words we use, this interpretation is not without problems.

The problem for this reading arises from the fact that the secondary sources unambiguously attribute to Epicurus a theory of meaning which consists of only of two elements: the word and the external thing to which the word refer. In the following passage Sextus explains Epicurus' position by contrasting it to that of the Stoics:

> And the Stoics stood for the first opinion, saying that three things were connected with one another, the thing signified, the signifier and the object. Of these the signifier is the utterance (for example, the utterance "Dion"), the things signified is the actual state of affairs revealed by it, and which we apprehend as it subsist in our thought, and which foreigners do not understand even though they hear the utterance; and the object is the externally existing thing (for example, Dion himself). […] But Epicurus and Strato the physicist accept only two of these, the signifier and the object. (SE *M* VIII.11-13, transl. Bett)

Similarly Epicurus' position explains Plutarch who considers this to be a great problem for the Epicureans. He writes the following:

> Who is more in error than you [the Epicureans] about language? You completely abolish the class of sayables, to which discourse owes its existence, leaving only words and name-bearers, and denying the very existence of the intermediate states of affairs signified, by means of which learning, teaching, preconceptions, thoughts, impulses and assents come about. (Plut. *Col*. 1119F = LS 19K)

Basically, although the most plausible way to understand preconceptions is to take them to be some kind of meanings, the problem arises from the fact that the secondary sources unambiguously object to Epicurus that he exactly misses to see this point, namely that there must be something intermediary between the external object and the utterance – something that describes all particular objects of some kind and is always associated with the uttered word. It naturally follows from the way they are formed to understand them as meanings, since they represent some kind of very basic abstraction which enables us to recognize an object as a specific instance of a type. We are able to do that because we have stored

[250] Striker (1996), 39.

memories of perceptions of similar objects from which certain level of generalization is achieved, namely preconceptions is formed. And the best way to understand this process is to say that preconceptions are in fact the meanings which 'underlie our words'. However, Epicurus' position is contrasted with that of the Stoics, who contrary to Epicurus introduce mid-term, the thing signified (*lekton*), which has a function of meaning: if one hears some language she do not understand, she will hear utterances (the signifier), maybe later observe things to which the utterances refer, but will not understand 'the thing signified' in the moment of hearing the utterance for the first time. In the Stoic's theory of language, the difference between *lekton* and two other elements is even more sharpened by the fact that *lekton* is not corporeal while the object and the signifier are corporeal. In spite of the differences the ontological aspect is of a great relevance for the Epicureans' understanding of preconceptions and their function as well.

In the atomistic Epicurean world there is no room for non-corporeal entities, such as Stoic's *lekton*. Introducing into epistemological explanation such purely mental items for Epicurus opens a deep problem of objectivity. As we have seen previously, truthfulness of perception is granted with the fact that they accurately match the external reality exactly because there is no medium between perceptions and the world. For Epicurus thus epistemological objectivity lies in the external reality to which we need to be firmly attached. So in our approach to the understanding of preconceptions we need to carefully pay attention to this condition. However, as some scholars rightly observe, in Epicurus' theory there is enough evidence to support two different readings. The first one is indicated by the expression 'things which underlies words' which appears both in Epicurus' own text and in Diogenes' report, which suggests that preconceptions should be understood as something essentially internal to the mind which can be associated with the meaning of words. On the other side, the second interpretation rightly insists that Epicurus' canonic generally does not support introduction of any kind of mental entities, so preconceptions has to be understood in purely materialistic terms which is the only explanation allowed within atomistic theory. Exactly this interpretation is supported by Sextus' and Plutarch's reports which clearly emphasizes a direct correlation between words and external reality. And such interpretation of Epicurean epistemology for sure is not a false one since it is clear that Epicurus' main epistemological aim is to exclude any mediator between perceptions and preconceptions on the one side, and the physical reality on the other. For Epicurus this is the only path for ascertaining the truth. So the problem for the Epicureans is to explain the way preconceptions, which apparently

carry the characteristic of intensions, fits to an overall Epicurean epistemological dependence upon atomism and avoidance of internal entities of mind.

A major work on a detailed scrutiny of this tension is done by Glidden. According to his reading the difference in interpretations is in the following:

> On the former interpretation it is '*conception* of the things which underlie our utterances' which is all determining. On the latter interpretation it is rather the world which triggers *our recognition*. It is a difference between *de dicto* and *de re*. It is also the difference between a psychological reading of the line, concerned with the way in which the subject represents the world to himself, and an ontological reading, concerned with the state of the world which we happen to recognize.[251]

The problem is that, as Glidden point out, there is a competition between understanding prolepsis as purely intensional or extensional devices, where 'intensional' captures the traditional Fregean notion 'sense', while extensional referrers to the set of objects that the word stands for. Diogenes' report and identification of prolepsis with "perception, or correct opinion, or conception, or universal 'stored notion'" and the example of the preconception of the men supports both of detected interpretations suggesting at the same time that preconceptions are meanings as intensions, but also that they are identified with extensions of terms. As Glidden notes, 'man' "signifies some conception of man, enabling us to make sense of the sounds we speak", but also 'man' "names some perceived form, some sort of thing which we have found in the world and which our speech then names".[252] The former is the intensional, while the latter the extensional reading. Just to compare, in the Stoic's epistemology *lekton* is clearly intensional, having representational, propositional content that can be true or false and as such is sharply separated from the uttered words or the object signified.[253]

One possible solution is given by Long who claims the following:

> If this function of prolepsis [the function of mediator between words and things] is overlooked we saddle Epicurus with an extremely crude theory of meaning, whereby a word means the actual thing, i.e. physical object, about which someone is speaking. On such a theory it would be impossible for Epicurus to speak of the false beliefs which people have concerning, say, the gods. There is no external reality or fact corresponding to the words 'the gods are malevolent', but Epicurus clearly thought that people could utter this sentence meaningfully. The postulation of prolepsis as intermediate between words and things takes account of many false and mistaken assertions, and assertions about that which does not exist.[254]

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[251] Glidden (1985), 176.
[252] Glidden (1985), 181.
[253] DL VII.63 = LS 33F.
[254] Long (1971), 121.

So for Long Epicurean preconceptions are meanings in the same sense as the Stoic's *lekta*, because without them in Epicurus' epistemology false beliefs could not be expressed. Nevertheless, Long's explanation is not satisfying. First, in Epicurean epistemology false beliefs are distinguished from preconceptions, just as in the case of perceptions. So the example Long provides us with, 'the gods are malevolent' is an example of a false belief which is perfectly meaningful because to the content of preconception there is an added belief. Second, there is no evidence in any of the Epicurean sources which indicates that Epicurus postulates some kind of mental entity, purely internal to the mind that would correspond to the Stoics' *lekta*, but just the contrary. As Asmis rightly emphasizes, "Epicurus' physical theory provides confirmation that he did not admit meanings intermediate between sounds and physical reality."[255] Therefore, the explanation of preconceptions should be established exclusively on the firm and direct correlation with the external reality. Consequently, it follows that what is subordinated to our utterances are in fact physical objects. This, nonetheless, opens the question whether such reading necessarily excludes the possibility for *prolepsis* to have a function of the meaning which underlies words. Glidden opts for that solution according to which preconceptions are purely extensional, that is, an interpretation in which the explanation of the function of preconceptions emphasizes inseparability of Epicurus' epistemology from ontology in order to secure the objectivity of preconceptions but also their role as the criteria of truth. The link is such that preconceptions are directly attached to external reality, so that they literally grasps of portions of reality.[256] Asmis' solution goes in the same direction, but in addition she offers a clearer view on the semantic status of preconceptions by saying the following:

> Granted that Epicurus correlated utterances directly with physical things, it is reasonable to suppose that he called the latter "subordinate" to the former. But where does this leave the primary concepts, or thoughts, that correspond to sounds? They do not form a separate semantic category, I suggest, because they present physical reality just as it is. Epicurus held an analogous position concerning perception: what is presented in perception, he maintained, is in reality just as it appears, without there being any possibility of distortion or misrepresentation. […] It makes no difference, therefore, whether we view the thought of the physical thing or the physical thing itself as subordinate to the utterance: in either case what is associated with the utterance is the physical thing as it really is.[257]

I completely agree with Asmis' interpretation, but however, I believe that preconceptions explained in such a way do have a semantic role – namely, they are meanings

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[255] Asmis (1984), 30.
[256] This idea is indicated, as I previously said, by Diogenes' usage of *katalepsis* in description of *prolepsis* in DL X.33.
[257] Asmis (1984), 27-8.

of words. This does not imply intensional reading and is perfectly compatible with the fact that there is no difference between the 'thought of the physical thing and the physical thing itself' if we take that a 'thought' here stands for a psychological state of grasping of the meaning of the word. At the mental level, Epicurus as a consistent materialist takes that all mental occurrences are explicable in terms of rearrangements of atoms. In regards of their semantic function, in my view Epicurus' theory here resembles to some extant the basic idea of the theory of meaning suggested by Putnam and introduced in one of his early though very influential article "The meaning of meaning".[258] Putnam maintains that the 'meaning is not in the head' because the key element of the meaning is extension. In other words, Putnam claims that the meaning of the word is specified by its referent and not by a psychological state of a subject who grasp the meaning of the word, that is, by intension. In that sense, Epicurean preconceptions that underlie our utterances are similar to my oversimplified Putnamian understanding of meaning. Given this postulating of an entity analogous to the Stoics' *lekton* for Epicureans seems to be redundant since what determines our utterance is not a separate mental entity or state but the external referent. For Epicureans *prolepsis* is always a movement of thought that necessarily implies the existence of something external by which the 'thought is moved' and more importantly, with which prolepsis is identified on the atomic level. This ontological commitment is the guidance both for the understanding of perceptions and preconceptions. And just as in the case of perceptions Epicurus avoids postulating awareness of inner mental entity, he follows the same economical pattern indebted in the atomistic theory, for preconceptions as well. Nevertheless, preconceptions understood primarily as extensions can serve as meanings of the words: they specify the set of things the preconception is true of.[259] What we have in the mind are outlines (*tupoi*) which can be either an image, as in the case of basic preconceptions such as 'red' or 'horse', or a more complex outline (*hupographe*) "which will form a correct basis for the completion of the concept and the filling in of details later".[260] We can conclude saying that this specific function of prolepsis as meaning is indicated in the first sentence of passage 37 and it serves as a basis for a unique epistemological function of prolepsis, namely as the criterion of truth.[261] So we can say that the analysis of the phrase 'things which underlies utterances' shows that the reading according to which Epicurus indicates meanings with the phrase is proved to be admissible.

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[258] Putnam (1975).
[259] Another argument in favor of this is Epicurus' theory of language-development from preconceptions.
[260] Rist (1972), 27-8.
[261] See also Scott (1995), 166-8, 171-2.

Let me briefly run again through the key passage. At the beginning of passage 37 Epicurus says that we need to have *prolepsis* "so that we may have them as *a reference point* against which to judge matters of opinion, inquiry and puzzlement, and not have everything undiscriminated for ourselves as we attempt infinite chains of proofs, or have words which are empty". In other words, we need to have prior understanding of the words we utter in order to avoid infinite regress in demonstration and utterances which are empty. As far as empty words are concerned it is quite clear that Epicurus aims to establish utterances which are attached to the external reality, so the emptiness of the words as I understand it refers then to those cases in which there is no such a connection.[262] We can turn again to Striker's point who, as I previously quoted, takes this in order to support the reading according to which grasping of *prolepsis* is necessary for avoiding meaningless word. So in order to know whether a thing subjects confronts with is a tower or not, one needs to know the meaning of the word 'tower', that is the *prolepsis* must be grasped prior in order to enable a subject to understand and answer the question. And I add to this reading that the meaning of 'tower' is fixed and identified with the extension of the word, that is, the class of towers. Striker continues saying that "in this sense having *prolepseis* is a precondition for the evaluation of opinions, etc., though not sufficient for determining their truth or falsehood: to understand a judgment is not yet to know whether it is true or false."[263] To put it differently, to understand a judgment that 'a tower is round' does not yet say anything about the truth of the judgment itself. But *prolepsis* tower is necessary for the basic understanding of the judgment. Before I consider the second harmful consequence of the failure in grasping preconceptions, let me add another important point related to the function of preconceptions as the necessary condition for the understanding the words.

In antiquity Epicurus was accused of abolishing the definitions. We do not find explicit rejection in Epicurus' own texts, but the position is attributed to Epicurus by different ancient sources. In Cicero's *On Ends*, Torquatus, an Epicurean advocate, starts his discussion on the key notions in Epicurean ethics, pleasure and pain, by asking "who needs a definition to assist him to understand it [pleasure]?"[264] The question implies that the definition of pleasure is completely redundant, since "our proleptic understanding of a certain term, 'x', is sufficient, and nothing is gained by asking the question, 'what is x?', because to understand

[262] Cf. DL X.86.
[263] Striker (1996), 39.
[264] Cic. *De fin.* II.6

the question is to answer it".[265] So definitions are abandoned simply because they are unnecessary, given that preconceptions provide us with a basic understanding of term, they simply do not require any further defining. This is exactly in accordance with what Epicurus' demands in 37, namely that an inquiry must start with already grasped meanings of words, that is with prior understanding of what is about to be investigated.[266] Therefore, the complex preconceptions, like 'god is an immortal and blessed creature' or 'justice is what is beneficial in communal dealings with one another' are not definitions, but outlines or sketches (*hupographai*).

For Epicurus, as Long and Sedley point out, this is not "the end-product of a dialectical investigation, as a definition should be, but an initial listing of the contents of the relevant preconception".[267] Asmis also notes that the term *hupographe* is a technical notion in Hellenistic philosophy used for specific descriptions "that brings to mind the ordinary, empirically acquired concept of a thing by stating certain prominent features that are obvious to everyone"[268] and as such is differentiated from the standard term for definitions '*horos'*. For Epicureans definitions cannot be starting point for inquiry because they already require knowing the meaning of words, that is, proleptic knowledge. Another Epicurus' requirement is that proleptic knowledge has to be self-evident in order to serve as the referential point against which truth and falsehood are judged. This brings us to the second problem that follows from a failure of grasping preconceptions: we will "have everything undiscriminated for ourselves as we attempt infinite chains of proofs".

The remaining question we have to answer concerns the kind of infinite regress and demonstration (*apodeiknuein*, *apodeixis*) Epicurus has in mind that is related to the criterial role of preconceptions. We have seen that preconceptions are supposed to serve as the starting point in inquiry which enables the inquirer to recognize and identify objects of inquiry, that is, to specify what something is in perceptual content. Commentators agree that Epicurus here is offering a solution to the well known ancient dilemma, known as Meno's paradox. According to the paradox, presented in Plato's *Meno* (80d5-e5), inquiry is impossible whether you know or do not know what you inquire. In the first case, if you know then it is unnecessary to inquire since you already know the subject of the inquiry, and in the second case, if you do not know what you inquire, you cannot even start, simply because you do not what is the

[265] Scott (1995), 171.
[266] Asmis points out that this of course does not exclude the possibility for preconcpetions to be explained. It is particularly important for complex preconceptions, such as justice or god
[267] LS, 101.
[268] Asmis (1984), 43.

subject you are supposed to inquire. As Grgić observes, the most plausible and widely accepted solution of the paradox in ancient times was to assume that there is some prior knowledge with which we start an inquiry. Thereby the Stoics and Epicureans "suppose that the required antecedent knowledge is embodied in the inquirer's possession of a certain class of concepts – 'natural concepts' (the Stoics) or 'preconceptions' (the Epicureans).[269] They agreed to some modified version of the principle of epistemic priority, postulated by Socrates in *Meno*, where he says in 71b that we cannot know what an object is like without knowing what it is.[270]

Besides this, Epicurus also dedicate to preconceptions a function of the criterion of truth and demands that therefore they "must be seen and need no additional proof, if we are going to have a reference point for matters of inquiry, puzzlement and opinion". It is obvious that Epicurus here is trying to block an infinite regress in demonstration. The quoted part of the sentence of passage 38 gives the explanation of the demonstration Epicurus has in mind and the *ad infinitum* argument which has to be blocked. Namely, if preconceptions are to serve as standards against which we judge opinions, then they themselves need to be self-evident, that is, such that requires no demonstration or any additional clarification. If on the other hand they would require proof, we would end up in an infinite regress of demonstration and be left without a firm starting point for any inquiry and also without a possibility for testing and justifying judgments. As Striker points out, to demand a proof for criteria "would require still other criteria, and to argue for them would require yet more, and so forth – in short, this demand would result in an infinite regress".[271] Therefore, preconceptions are 'seen' (*blepesthai*), which means that they are both literally seen, for those basic preconceptions which are like images, but that they are also presented in the mind immediately and grasped directly without any additional demonstration. Therefore, preconceptions are self-evident (*enarges*), which is a technical term both in Hellenistic philosophy, but more importantly in Epicurean epistemology, meaning "not requiring demonstration"[272].

It is widely accepted among commentators[273] that Epicurus adapts this argument from Aristotle's discussion in *Posterior Analytics* (I.3), where Aristotle argues that the starting premise of a demonstrative syllogism are such that requires no further proof. Namely,

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[269] Grgić (2008), 4-5.
[270] For a more detailed discussion of the relation between the principle of epistemic priority and preconceptions in the Epicureans and the Stoics see Goggins (2007).
[271] Striker (1996), 40.
[272] Asmis (1984), 36. The term is in the same sense used for preconceptions indicating their self-evidence because they directly match with its cause, and thus can serve as the crieterion of truth.
[273] Asmis (1984), LS (1987), Scott (1995), Striker (1996).

Aristotle holds that all knowledge is established on demonstration since in order to know something we need to be able to explain why is that so, that is, we need to find a cause, which for Aristotle is presented in the form of a demonstrative syllogism. But if in the explanation of the premises in the syllogism we would continue infinitely long in explanation, the result would be an infinite regress of demonstration and consequently, impossibility of knowledge. Therefore, Aristotle resolves the regress by postulating that the first premises, which he calls first principles, require no proof. Epicurus' preconceptions correspond to Aristotle's first principles, in having the same function. However, the difference between the two is that for Aristotle the first principles are comprehended by *nous* (some kind of inner intuition) and they are definitions (*horoi*) that in conceiving go beyond memory of what is perceived. Unlike this for Epicurus preconceptions are generic presentations or propositions (but not definitions) that do not exceed in their content entirely empirical origin, guaranteed by the fact that all preconceptions are formed through the routine process in which environment causally act upon human nature.

We can conclude analysis of prolepsis saying that preconceptions for Epicurus are self-evident truths that together with perceptions serve as the criteria of truth. They are completely derived from perceptions and in that sense, being perceptual derivatives, they are not independent criterion. Nevertheless, they cannot be merely reduced to perceptions because their function ensures them a unique place in Epicurean epistemology. Epicurus in the *Letter to Herodotus* 37-8 assigned them three main functions: (i) to give meanings to our utterances; (ii) to serve as a starting point in inquiry and (iii) to serve as the criterion of truth against which opinions are tested. In regards to their function of meanings I argued that we should understand them as extensions of the term because Epicurus' conception of truth is established on the exact correspondence with the external reality. Preconceptions are thus generic notions that stand for a class of things given in our experience. Although this indicates the importance of preconceptions for the development of language, their epistemological role is that they serve as a cognitive tool for organization and identification of perceptual material. In other words, perceived objects have their organization in virtue of preconceptions. Therefore, preconceptions are necessary condition for conceptualization of nonconceptual content of perception and for formation of propositional attitudes. As such, they are prerequisite in any inquiry and the reference point for judging things in the world. This is what makes them a separate criterion of truth and inevitable cognitive tool for acquiring knowledge of the world.

And now when we are equipped with the criteria of truth, preconceptions and perceptions, we are left to see in what way Epicurus applied the criteria when testing beliefs. In particular, Epicurus is interested in evaluation of judgments about what is unobserved (*adela*) on which the whole atomistic theory rests.

4. EPICUREAN SCIENTIFIC METHODOLOGY: EVALUATION OF BELIEFS

The central idea of Epicurean methodology by which we evaluate beliefs as true or false is based on previously mentioned sharp distinction between perception and preconceptions on the one side and beliefs on the other. The basic idea is that the criteria of truth have to be true themselves and only as such can serve for testing of beliefs. The incorrigibility of both criteria of truth is established solely on the veridicality of perceptual report, since as we have seen, preconceptions are derived from perceptions. Epicurus thus equipped us with the fundamental elements for the formation and validation of beliefs. Beliefs about objects in the world are formed on the basis of perceptual report. The content delivered by perception, as I have argued, is non-conceptual, that is, it is not classified and structured. The process of classification is the one in which preconceptions are formed. Perceptions and preconceptions are thus prerequisite for belief formation. I take it that the initial process of belief-formation is something that can be explained as consisting of the following elements: perception coming from without and preconception coming from within. This kind of process DeWitt calls recognition, but he wrongly, in my view, takes that this is an act of true perception.[274] However, perceptions and preconceptions are not only prerequisite for the formation of beliefs, but also they serve as the standards against which beliefs are testified.

In this final chapter I shall present the way criteria, perceptions and preconceptions, are used and applied in practice. The most important part of the practical application considers justification of beliefs about things that are not observable or non-evident things (*adela*), such as atoms. This is particularly important for Epicurus because it reflects his main epistemological quest: to justify the truthfulness of atomism on the basis of sense evidence and to show inseparability of the atomistic theory from sense experience. In other words, the upshot of Epicurean scientific methodology is to assure that the argument for atomism can be

[274] The main reason for thinking that DeWitt's interpretaion is not appropriate one is simply because Epicurus does not make a distinction between true and false perceptions, but recognizes only beliefs as candidates opened for falsehood.

established only if the phenomenal world is saved, and equivalently, that the phenomenal reality can be accounted for only on the grounds of atomism. Therefore, Epicurean scientific methodology will show us a distinctive and rather rigorous character of Epicurean empiristic epistemology and the extent to which the Epicureans are ready to go in pursuit of foundationalist theory of justification established on sense experience.

In contrast to the absolute incorrigibility of the criteria, beliefs are opened to falsehood because the formation of belief is the process of interpretation of perceptual report by use of preconceptions. This is the cornerstone of Epicurean error theory which in the *Letter to Herodotus* Epicurus explains in the following way:

> And error would not exist if we did not also got a certain other process within ourselves, one which, although causally connected, posses differentiation (*dialepsis*). It is through this that, if it is unattested or contested, falsehood arises, and if attested or uncontested, truth. (DL X.51, transl. LS 15A12)

The main point of the error theory is to account for the absolute truthfulness of perception and to show that alleged misperceptions are in fact false beliefs. If this is achieved then, perception as totally free form error, can serve as a secure foundation of knowledge. This could be done only if perception is sharply distinguished from judgment. The distinction is indicated by the notion of 'differentiation' (*dialepsis*) which specifies an internal movement of atoms which arises from within and different from the movement caused by external impact, *eidola*, in perceiving. As I argued previously, perceptions are true because they accurately reflect the state of impacting *eidola* on the sense organs and the mind, whereas belief, as a separate process, then interprets perceptual content. In the process of belief-formation it is possible to misinterpret the content of perception and to judge that perception presents something that does not actually obtain. However, the crucial part is that the content of perception always remains unaffected by any kind of interpretation and precisely because of this perceptions can serve as the criterion of truth. In regards of accuracy of beliefs, Epicurus claims that a subject will form a true belief only if the content of belief does not go beyond what is given in perception, either by taking away from it (disregarding those elements that are present in perception) or by adding (making assumptions about parts of the content which are not present. Otherwise, a false belief occurs. Nonetheless this is not of much help if we do not know how to avoid making errors in judging things in the world and exactly in what way to make true beliefs, that is, how to learn to recognize misinterpretation of perceptual content made up in the process of belief-formation. In the passage quoted above Epicurus lists the methods by which the truth of beliefs is tested, named as the methods of

witnessing and counterwitnessing. He lists four possible combinations of practical usage of the methods: (i) non-witnessing (also translated as non-confirmation or non-attestation, *ouk epimarturesis*); (ii) counterwitnessing (refutation, contestation, *antimarturesis*); witnessing (confirmation, attestation, *epimarturesis*); and (iv) non-counterwitnessing (non-refutation, non-contestation, *ouk antimarturesis*). First two methods yield falsehood and the other two yield truth. And the principle by which the methods are distinguished is their practical applicability: by witnessing and non-witnessing are tested beliefs about evident or observable things, while by counterwitnessing and non-counterwitnessing beliefs about non-perceptible reality. The following table presents the main notions of the methodology:

	METHODS OF TESTING BELIEFS	
	OBSERVABLE REALITY	NON-OBSERVABLE REALITY
TRUE	witnessing	non-counterwitnessing
FALSE	non-witnessing	counterwitnessing

In establishing the methods Epicurus proceeds from the fact that beliefs about things in the world actually refers to two different groups of objects: the first one consists of objects that can be directly observed (*prodela*) and the second is the group of non-observable ones (*adela*). This is due to the fact that perceptions provide us with a direct knowledge of visible things, but knowledge of the world if limited only to those objects would be rather poor. In other words, Epicurus wants to show that it is possible to determine the truth or falsehood of beliefs not only about objects such as towers or other macroscopic objects apprehended directly by perception from a nearby, but also about further remote objects as sun and other celestial phenomena or things that do not belong at all to the perceptible reality, such as atoms. This is clearly emphasized by Epicurus in passage 38 of the *Letter* when he says that we should observe everything in the light of our perceptions "in order to have a basis for sign-inferences about evidence yet awaited (*prosmenon*) and about non-evident (*adelon*)".

So, according to the Sextus' report Epicureans first distinguish between reality of what is evident (*enarges*) and non-evident (*adelon*). Next he distinguishes between two types of non-evident things: observable things which await confirmation (*prosmenonta*) and things which are imperceptible (*adela*). Finally, in the class of imperceptible things, some of them are totally non-evident and some naturally non-evident.[275] The examples will be discussed in

[275] Cf. SE *PH* II.97-8, *M* VIII.146.

more length, but I will list them briefly to clarify the key notions: things awaiting confirmation (*prosmenonta*) are those temporarily non-evident or things far off, such as someone approaching from a far; things totally non-evident are those that go beyond possibility to be known, such as whether the number of stars is even or odd; and things naturally non-evident are those which by their nature cannot be evident, such as atoms or celestial bodies which cannot be seen from a close up.

In Epicurus' view methods of testing beliefs about these types of objects are not the same. Namely, the truth of beliefs about perceptible class of objects will be based on direct evidence of perception. However, the truth of beliefs about imperceptible objects clearly cannot be established on direct evidence of perception simply because they do not belong to perceptible reality, either temporarily or naturally, and as such are not part of the content of perception. Therefore, the method of testing beliefs about non-evident will invoke indirect justification and specific methods of inference which nevertheless, Epicurus argues, are grounded in perception. In 38, thus, Epicurus introduces the theory known in ancient philosophy as the theory of signs according to which perceptual evidence can have a special evidential function for the justification of what is non-evident when used as a sign for the invisible reality.[276] After this general sketch of the main notions in Epicurean methodology of testing beliefs, we can proceed to a detailed analysis based on the examples of testified beliefs.

The most detailed report of the practical application of the methods fulfilled with the examples is found in Sextus. His account of the methodology appears immediately after the presentation of Epicurus' central epistemological claim about incorrigibility of perception. The text then runs as follows:

> Of opinions, then, according to Epicurus, some are true, some false. True are those attested and those uncontested by self-evidence; false are those contested and those unattested by self-evidence. Attestation is perception through a self-evident impression of the fact that the object of opinion is such as it was believed to be. For example, if Plato is approaching from far off, I form a conjectural opinion, owing to the distance that it is Plato. But when he comes close, there is further testimony that he is Plato, now that the gap is reduced, and it is attested by the self-evidence itself. Non-contestation is the following from that which is evident of the non-evident thing posited and believed. For example, Epicurus, in saying that there is void, which is non-evident, confirms this through the self-evident fact of motion. For if void does not exist, there ought not to be motion either, since the moving body would lack a place to pass into as a result of everything's being full and solid. Therefore the non-evident thing believed is uncontested by that which is evident, since there is motion. Contestation, on the other hand, is something which conflicts with non-contestation. For it is the elimination of that which is evident by the positing of the non-evident thing. For example, the Stoic says that void does not exist, judging something non-evident; but once this is posited about it, that which is evident, namely motion,

[276] For an extent reserach on this topic in ancient philosophy see Allen (2001).

ought to be co-eliminated with it. For if void does not exist, necessarily motion does not occur either, according to the method already demonstrated. Likewise, too, non-attestation is opposed to attestation, being confrontation through self-evidence of the fact that the object of opinion is not such as it was believed to be. For example, if someone is approaching from far off, we conjecture, owing to the distance, that he is Plato. But when the gap is reduced, we recognize through self-evidence that it is not Plato. That is what non-attestation is like: the thing believed was not attested by the evident. Hence attestation and non-contestation are the criterion of something's being true, while non-attestation and contestation are the criterion of its being false. And self-evidence is the foundation and basis of everything. (SE *M* VII.211-16, transl. LS 18A)

We can start with the first pair of methods, witnessing and non-witnessing, used for testing beliefs about observable things. Sextus uses the example of a person approaching at a distance where it is not clear whether it is Plato approaching in order to explain how beliefs which are attested are true and those which are not attested are false. The belief 'this is Plato' is true just in the case when on the person's near approach, it shows up that it actually is Plato, that is, when we posses the evident fact which attests belief. The evident fact is of course perception by which the belief is confirmed, since the belief actually presents what really is. In the process of belief-formation about person approaching nothing is added or subtracted from perception and therefore the belief 'this is Plato' is attested by perception. In the same fashion, the belief about our well known tower seen from afar is not attested when we approach to the tower and declare its actual shape form a nearby. Now the difference between perception and beliefs can be fully explained. Namely, perception reporting the shape of the tower from afar is true just as much is the one reporting the shape from nearby. Both perceptions are true because they truly report the state of *eidola* once they reach the sense organ. This means that the state of *eidola* always reflects the difference of perceptual circumstances because of which the same state of affairs or objects can be presented in different ways. And as I previously argued, the content of perception in Epicurean theory should be explained as non-conceptual in order to capture this element which secures the truthfulness or the self-evidence of perceptions. On the other hand, beliefs involving interpretation of perceptions have content that is opened for falsehood. Therefore Epicurus' idea is that the belief 'the tower is round' is not supported by perception received from afar since that belief subtracts the content of the perception, which is supported with the other perception of a closer view. In Epicurean terminology, therefore, the belief 'the tower is round' is not confirmed by perception and as such is false. Thus, falsification of beliefs about what is awaiting confirmation occurs when there are clear facts to show that the belief in question is not attested, that is, not confirmed by what is evident, i.e. expected perception.

The crucial part of the theory is that all perceptions have the same evidential data and as such serve as the standards against which beliefs are testified. Once the standard is settled Epicurus proceeds to distinguish between states of affairs which are actually presented in a sense perception from those which are judged to be presented. We are often inclined to think that when an object is presented in ways which are seemingly incompatible with each other that what is presented in at least one of the perceptions must be false. But Epicurus simply claims that there is nothing wrong with the fact that objects are not presented in the same way in different perceptual circumstances and therefore each perception has the same evidential validity as it is shown in the case of the tower seen from afar and nearby, namely they all counts as evident (*enarges*) because they serve as the secure foundation for developing true judgments about the things in the world. However, in that process Epicurus recognizes that in order to get a true belief about the nature of particular objects we need to collect appropriate evidence and we should not judge things too hastily. We need to wait for a close up view to judge the nature of the tower or person approaching because in that position we are able to get appropriate evidence for the belief in question. This means that we have to find as much as possible evidence to verified or falsified our beliefs and, as Diogenes reports, "hence their [Epicurean's] introduction of 'that which is awaited' – for example, waiting and getting near the tower and learning how it appears from near by" (DL X.34, transl. LS).[277]

However, as scholars usually observe, the strange thing in Epicurus' methodology is that he does not take the method of refutation by perception (*antimarturesis*) to be appropriate one for this sort of beliefs, but rather he pairs the method of witnessing with the method of non-witnessing as opposites. Sextus' example thus seems to be misleading, namely, it seems that the belief that it is Plato is simply refuted by perception we get once the distance is reduced, that is, we have evidence against and not the lack of evidence as the name of Epicurus' method suggests. Nevertheless it seems to me that Sextus' example may fit Epicurus' terminology if we understand it in the following way: once the distance is reduced we realize that expected evidence for the thing awaiting confirmation does not occur, which indicates then that our belief is not witnessed. In other words, since we were expecting Plato, Plato's not showing up is considered as non-confirmation of the belief that this is Plato. Therefore, as Asmis nicely points out, "what constitutes this nonappearance is the failure of an object to be evident just when, according to our opinion, it should be evident".[278] Further reason for taking attestation and non-attestation as the opposite method Long and Sedley find

[277] See also Plutarch, *Adv. Col.* 1121CD.
[278] Asmis (1984), 192.

in the fact that those methods are used primarily as scientific methods for testing empirical generalizations and "in such cases non-attestation – failure to discover confirmatory instances – will normally be sufficient ground for rejecting the hypothesis, and perhaps the only possible ground"[279].

So, the methods of verification and falsification of the first type of non-evident things, observable things awaiting confirmation, show that the belief is true when it is supported by direct evidence of perception, that is, when witnessed by what is evident (*enarges*) about the nature of the object the belief is about. By the method of non-witnessing the belief is testified as false since the evidence in favor of what is expected to be confirmed does not occur. In both cases, the truth value of the belief about observable reality is tested through direct application of the sense organs which necessarily grasps the truth due to the eidolic theory of perception and as such serve as the evidence. What we also learn is that the preferable position for making judgments about things awaiting confirmation is a closer view because in that case we have a 'clear' view. This should not be interpreted, as some scholars[280] do, that Epicurus is introducing distinction between perceptions, claiming that only perception from a clear view are in fact true ones. I take it that the fact that we get more precise information about the nature of observable things from a closer view is something that we actually learn through perception, namely because the difference in perception are causally related with the differences in circumstances of observation. Therefore Epicurus' points as I see it is that it is normal that perceptual report vary in different positions, but we have to be cautious when we judge what is given in perceptual report.

Let us turn now to the other pair of the methods used for non-evident things belonging to imperceptible reality. The things belonging to this ontological group are, as already said, of two kinds: things imperceptible by nature, such as atoms, and things imperceptible from a nearby, such as celestial bodies.[281] The main difference between these groups of things lies in the fact that the things awaiting confirmation by nature fall under direct evidentness while non-evident things (*adela*) are naturally forever hidden from direct evidence. Therefore the methods used for the beliefs about the later group, as it is reported, are non-counterwitnessing and counterwitnessing. Explanation of these methods of testing beliefs is more demanding since the methods are not established on direct evidence of perception, but uses perception as

[279] LS, 94.
[280] In the most extreme version DeWitt (1943), Bailey (1928), Long (1971), Rist (1972). Basicaly all scholares who hold that the notion *'alethes'* means real and not true, support their view by pointing out that Epicurus by the distinction betwen the clear and not clear view differentiate between perceptions.
[281] This is the standard interpretation about the what class of things Epicureans consider as *adela* proposed by Bailey (1928), 264-5 and later by Rist (1972), 35, 37-40.

an indication or sign (*semeion*) for knowledge of the things hidden from our experience and obviously imply using some kind of inference. Justification of this sorts of belief, as I already pointed out, is central for Epicurean epistemology, since here they have to prove atomism and moreover, to show its compatibility with the phenomenal experience and beliefs about observable reality.

What is obviously the case here is that these sorts of verification or falsification of imperceptible things will involve inferential processes, that is, sign-inferences. As Barnes[282] explains, such inferences consist of the two elements: (i) thing from which we infer (*semeion*), which is the evident thing (*to phainomenon*, *to phaneron* or *to enarges*), which usually denotes something in our experience and "it incorporates whatever we know by *peira* or *historia*, by our own or other men's experiences"; and (ii) thing to which infer (*to adelon* or *to aphanes*) which is non-evident thing which is not part of our experience. In these processes of inference perceptual content, as what is evident from which we infer, serves as a sign of the imperceptible reality to which we infer. When it comes to the exact process of inference we meet again the notion familiar from the discussion of the formation of preconception, empirical reasoning (*epilogismos*). There I argued that *epilogismos* is a calculation of the similar experiences or the process of recognizing of the connections between repeated perceptions of external things which outcome is a formation of preconception. Here we have to say more about the character of the inferential processes which is important part Epicurean epistemology and scientific methodology. The problem for the interpretation is the lack of a precise definition of this technical term because of well known Epicurean resistance towards definitions. The examples of *epilogismos* in Epicurean texts are the following. Epicurus writes that,

"One must reason (*epilogizesthai*) about the real goal and every clear fact, to which we refer mere opinions. If not, everything will be full of indecision and disturbance" (KD XXII, transl. Inwood).

In another passage where Epicurus discusses why the investigation of time does not presuppose preconception of time, the role of *epilogismos* is explained in the following way:

One should not investigate time as we do other things which we investigate in an object, [i.e.,] by referring to the basic grasps (preconceptions) which are observed within ourselves, but we must reason [on the basis of] the clear experience according to which we utter [the phrases] "for a long time" or "for a short time" interpreting it in manner closely connected [to our experience]. […] But the best policy is to reason solely by means of that which we associate with this peculiar thing and by which

[282] Barnes (1989), 96.

we measure it. For this need no demonstration (*ouk apodeixeos*), but [only] reasoning (*epilogismou*), because we associate it with days and nights and their parts… (DL X.72-3, transl. Inwood)

This discussion comes right after Epicurus' discussion of permanent and accidental properties for which, as it appears from the context, we obviously have preconceptions. In contrast, the time is investigated by calculation or reasoning (*epilogismos*) of what is evident in our experience, that is, the relative duration of properties. For the present purposes it is important to notice empirical character of *epilogismos*, which is than further emphasized in the texts of later Epicureans. Philodemus writes the following:

…by empirical inference (*epilogismou*) from appearances I shall arrive at the view that similarity must exist in this respect also. For since this property follows on the men among us, I shall assuredly judge that it follows on all men, confirming by empirical inference that the similarity must exist in this respect also. (*De Sign*. XXII.37-XXIII.7, transl. De Lacy).

Philodemus' passage deals with the situation in which *epilogismos* serves as an empirical inference by which we calculate similarities among particular instances and from that we infer to what is non-evident. In other words, *epilogismos* is here case of sign-inference from observed property of men, mortality, to the inference that that property belongs to all men, that is, to those which are not part of our direct experience.

So, what can we conclude about *epilogismos*? Barnes observes that there are "different varieties of sign-inferences, but they are all genuine inferences, *sullogismoi*, and they thus offer proofs, *apodeixes*".[283] What is evident from Epicurus' writings, as it is emphasized by Asmis, is that he recognizes three types of inferential processes (*logismos*): *sullogismos*, *analogismos* and *epilogismos*.[284] All three terms are types of *logismos* which stands for "a logical relationship worked out by calculation". *Sullogismos* is "the combination of concepts by argument", *analogismos* is calculation of similarities either among the phenomena or among the perceptible and imperceptible reality. The most frequently used term is *epilogismos* for which I previously adopt Sedley's translation as 'empirical reasoning'. An overview of various interpretations of the term mostly suggests that *epilogismos* is used for both ethical and epistemological purposes. Leaving aside the ethical ones,[285] in the epistemological debate the term indicates some kind of a natural process of generalization based on empirical data of the kind inherent in the formation of preconceptions. Sedley starts

[283] Barnes (1989), 96.
[284] Asmis (1984), 176-8.
[285] In the ethical debate *epilogismos* stands for the reasoning involved in hedonistic calculus, the formation of utilitarian judgments, and in general for all reasoning about moral acts and human life goals and ends (DL X.133, *KD* XX, XXII). For the modern interpretations see Sedley (1973), 27-30, Schofield (1996), 226-32.

his explanation of the term saying that *epilogismos* "is the name of a process of reasoning, and that the prefix *epi-* carries the same connotation of empiricism and objectivity that we have found in *epiballein* and cognate forms. It is a process of reasoning based on practical experience – but not necessarily involving analogy or induction, as De Lacy maintains".[286] And De Lacy maintains that *epilogismos* "may readily be interpreted as referring to principles or generalizations derived from accumulated experience. Several times it is linked with memory, which is one of the empiricists' chief sources of data. There is also recognition of the need to examine all the pertinent evidence in a systematic way. Again, *epilogismos* is associated with the confirmation or refutation of an opinion."[287] Asmis, relying on Epicurus' usage of *epilogismos* in the discussion of time, explains that *epilogismos* is "an analysis of the observed association of time with days and night, affections and non-affections, and movements and states of rest; no demonstration is required, because it is an observed fact that we associate time in this way".[288] What is common to all these interpretations is that they considered *epilogismos* as the method used in scientific inferences for the purposes of showing whether scientific hypothesis are in accordance with what is evident. The central element of the empirical reasoning in that context is nicely pointed out by Schoefield who says the following:

> In science, what we must do is *compare* all our clear presentations of, for example, men to determine what is common to all and what is more peculiar to some. Then we will be in a position to infer – by what is called the 'likeness method' – what the men are like whom we have not seen.[289]

So what is indicated in Schoefield's quotation is the fact that the inferential step for Epicurus' in *epilogismos* is *grounded* on the similarity between the things from which we infer to the things which we infer, and as such *epilogismos* works as a comparative form of evaluation in scientific methodology. We have previously seen that the relation of similarity was essential for the formation of preconceptions but here we are given a more general framework: in fact *all* sign-inferences about non-evident things and moreover justification of such beliefs is established upon the crucial relation – similarity. More precisely, the sign-inferences based on similarity have the following form: "Since all K's in our experience are F,

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[286] Sedley (1973), 27.
[287] De Lacy (1958), 180-1.
[288] Asmis (1984), 178. Within this discussion Epicurus argues that there is no preconcpetion of time, but that we learn about time by *epilogismos* which does not calculate similar perceptions of one thing, namely time, but through .
[289] Barnes (1996), 226.

Ks elsewhere/everywhere are F."[290] The similarity, as we can see, does the all work in sign-inferences. According to the Epicureans the similarity is what establishes an inference from the sign to what the sign indicates, that is, from the evident to the non-evident thing, and it also justifies the inferential step from the sign to the signified thing. However, presented in the form above, it appears that sign-inferences for Epicurus are just inductive inferences. But the methods of testing beliefs for non-evident things, counterwitnessing and non-counterwitnessing, show that Epicurus is not limited only to the cases of inductive generalizations, but we find also the cases in which the similarity is part of the inferences which prove incompatibility of the non-evident with the phenomena or those in which the consequences are inferred directly from the evident. Both of the examples are concerned with the proof for the existence of void, as we shall see, and can be found in Epicurus' own texts. So let us now turn to the examples of sign-inferences in order to discuss this general framework of methodology of testing beliefs and their justification in practice.

In Epicurus own texts we do not find some chapter or part of his writings exclusively dedicated to some systematic and detailed discussion of the methods and the way they are applied, but what we find are occasional applications of the methods as a part of justification of certain problem in Epicurean physics. Therefore we have to turn to the other sources, which deliver systematic analysis of the methods. The most relevant for the sign-inferences are already quoted passage from Sextus and Philodemus' work *On Signs*. [291] And the key example of the sign-inference about the non-evident is the inference about the existence of atoms and void which entails justification of atomism by the methods of counterwitnessing and non-counterwitnessing. Finally the question we have to answer is: in what way do these methods justify inferences about atomism?

To remind us, Sextus reports that the example of non-counterwitnessing for Epicurus is "in saying that there is void, which is non-evident, confirms this through the self-evident fact of motion. For if void does not exist, there ought not to be motion either, since the moving body would lack a place to pass into as a result of everything's being full and solid. Therefore the non-evident thing believed is uncontested by that which is evident, since there is motion." Sextus claims that the relation between the non-evident void and the evident motion is such that the existence of void *follows* from the evident fact of motion and therefore

[290] Ib., 97.

[291] Philodemus' work is a difficult text that requires a special discussion. In this work I shall concentrate on those examples relevant for establishing general Epicurean account of the methods for establishing the truths about what is non-evident. For a carefull discussions of Philodemus' *De Sign.* see De Lacy (1978), Asmis (1984), Barnes (1996), Sedley (1982).

the belief about the void is uncontested. To put it more formally, according to Sextus, then, beliefs about the existence of void are justified if they fit within the following logical form in which non-counterwitnessing is explained as the form of logical entailment:

1. If there is motion, there is void.
2. There is motion.
3. There is void.

Similarly, the opposite method of counterwitnessing consists, as Sextus reports, of the removal or elimination (*anaskeue*) of the phenomenon when the non-evident thing is removed. Again, the formal version is the following:

1. If there is no void, there is no motion.
2. There is motion.
3. There is void.

That is, the method shows that by the elimination of the void as the non-evident thing, also the evident phenomenon, motion is co-removed.

However, scholars warn that Sextus' ascription to Epicurus this understanding of the method of non-counterwitnessing is problematic. Long and Sedley write that this could be hardly regarded as the example of non-counterwitnessing for Epicurus since the "expression (*ouk antimarturesis*, literally no 'counter-evidence') plainly implies nothing stronger than consistency with phenomena".[292] Similarly Asmis maintains that Sextus' terminology used for elucidation of the methods, namely the notions 'the consequence' or 'the following' (*akolouthia*) for non-counterwitnessing and the 'elimination' or 'removal' for counterwitnessing, is "very different from Epicurus' own use of the terms "agreement" and "disagreement" to explain the relationship between what is observed and what is unobserved; and the relationship of consequence, which Sextus illustrates by the claim that the existence of void follows upon the evident fact of motion, seems to consist in an incompatibility between the phenomena and the contradictory of the proposed theory."[293] Finally, the most vivid explanation of Sextus' error gives Sedley saying that any of the Epicureans "would be horrified by the false emphasis with which is done [the void inference by the elimination], particularly by the assumption that it is the inference from the motion to void that *in itself 'confirms'* the existence of void"[294] (the emphasis is mine).

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[292] LS, 95.
[293] Asmis (1984), 180.
[294] Sedley (1982), 265.

So what is problematic with Sextus' report is that Epicurus does not ascribe to the methods of counterwitnessing and non-counterwitnessing such logical necessitations according to which the non-evident *follows* from the evident in non-counterwitnessing or that the evident is eliminated by *elimination* of the non-evident in counterwitnessing, which implies that the necessity is given in the concepts themselves. Namely, according to the majority of scholars, it is very unlikely that Epicurus would approve such inferences within his empiristic methodology and in fact we would expect that he explains the connection between the antecedent and the consequent in these methods primarily by relying on the sense experience. And clearly the accent on empiricism is indicated, it seems, already in the name of the methods which suggests that Epicurus does not have in mind strict logical entailments when talking about counterwitnessing and non-counterwitnessing, but probably wants to show that the proof about what is forever non-evident should be either in accordance with what is evident to be validated as true or when not in accordance is validated as false. In other words, it is rather certain that for Epicurus the criterion of truth for the non-evident things is based on their compatibility or incompatibility with the phenomena.

However, in Epicurus' own writings we find the following argument for the proof of the existence of void. In the passage 40 of the *Letter* Epicurus claims that "if there where no space (which we call void and place and intangible nature), bodies would have nothing in which to be and in which to move, as they are plainly seen to move". The similarity with Sextus' report is quite striking, in spite of the differences and problems of Sextus' report to which scholars warn us. In fact, it appears that Epicurus' argument can also be formulated in the form of *modus tollens* which than support strongly Sextus' report. So my aim is to try to argue that both Sextus' and Epicurus' proofs of the existence of void, and consequently of all the things forever hidden from direct observation, are grounded upon the same principle that enables the transition in inference from the evident to the non-evident, namely, the compatibility of conclusion about the non-evident with the phenomena. In order to point to the similarities in the reports I shall turn now to the justification of beliefs about celestial phenomena, since the application of the methods in those cases unambiguously presents Epicurus' original idea about the methods.

Celestial bodies also belong to the group of the things which are forever non-evident in spite of the fact that we can see sun or moon, since their true nature cannot be discovered from a closer view. Therefore any theory about such objects cannot be verified by direct observation. Epicurus about this topic writes the following:

Signs relating to events in the celestial region are provided by certain of the things familiar and evident – things whose mode of existence is open to view – and not by things evident in the celestial region. For these latter are capable of coming to be in multiple ways. We must nevertheless observe our impressions of each one; and we must distinguish the events which are connected with it, events whose happening in multiple ways is uncontested (*ouk antimartureitai*) by familiar events. (DL X.87-8)

One of the things relevant for the present discussion Epicurus emphasizes is that the method of testing beliefs about celestial phenomena is established upon agreement or consistency with the evident things. This means that contrary to Sextus' evidence of strict logical entailment as, Long and Sedley rightly point out, "when Epicurus appeals to the principle the phenomena invoked are not […] the explanandum itself, but analogous phenomena within our direct experience".[295] Long and Sedley's view is supported by several other passages from Epicurus' own texts, such as passage 47 of the *Letter* where Epicurus argues for exceptional fineness of images (*eidola*) saying that "the images are of unsurpassed fineness is uncontested by anything evident".[296] In other words, since the theory of fineness of *eidola* is not inconsistent with the phenomena, we should accept it as true. The hidden, but the crucial premise is the one that relies on similarity between observable and non-observable reality. Only on these grounds it is possible to establish such argument since observable phenomena "serve as the model for analogous explanation of natural phenomena with the non-evident causes".[297] The theory in that way is proved by the method of non-counterwitnessing. However, what is problematic with such an explanation of the methods is the following: are the methods of counterwitnessing and non-counterwitnessing, being established upon mere compatibility with the phenomena, able to determine the truth? The possible objection to Epicurus' proposal, as Allen formulates, consists in the fact that "multiple explanations modeled on the phenomena in our experience are proposed for meteorological phenomena such as the waxing and waning of the moon, the varying lengths of nights and days, thunder and lightning, and the like. And it could seem that analogy is used in an unexceptional way in these cases to suggest aetiological hypothesis which can be neither decisively confirmed nor falsified by the evidence at our disposal".[298] So the most obvious problem, which is already indicated in the passage quoted above from the *Letter to Pythocles*, is Epicurus' method of multiple explanations.

[295] LS, 95.
[296] For the fuller version of the argument see Lucretius, *DRN* IV.110-28.
[297] Allen (1998), 309.
[298] Allen (1998), 310.

Namely, the problem that arises from Epicurus' theory of justification based on the agreement or disagreement with the phenomena is that there is a serious danger of having many theories about the non-evident which are compatible with the phenomena and which are mutually contradicted. And this is exactly the case with the celestial phenomena, for which Epicurus is ready to adopt multiple explanations. Although it might appear counterintuitive to maintain equal trustworthiness of inconsistent theories (or at least it might appear to ancient philosopher who thought that there is only one possible explanation of the real nature of the non-evident thing in question), Epicurus does not provide us with a solution for discrimination between conflicted theory. In contrast, Epicurus allows multiple explanations within his epistemology as we can see from the following passage:

> First we should not think that any other end is served by knowledge of celestial events, whether they be discussed in a context or in isolation, than freedom from disturbance and firm confidence, just as in other areas of discourse. And neither should we force through what is impossible, nor should we in all areas keep our study similar either to discourse on the conduct of life or those belonging to the solution of other problems of physics, for example that the totality of things is body and intangible substance, or that there are atomic elements, and all the theses of this kind which are uniquely consistent with things evident. In the case of celestial events this is not the case: they have multiple causes and accounts of their essence consistent with sensations. For physics should not be studied by means of empty judgments and arbitrary fiat, but in the way that things evident require. What our life needs is not private theorizing and empty opinion, but an untroubled existence. Now in respect of all things which we have a multiplicity of explanations consistent with things evident, complete freedom from trepidation results when someone in the proper way lets stand whatever is plausibly suggested about them. But when someone allows one explanation while rejecting another equally consistent with what is evident, he is clearly abandoning natural philosophy and altogether and descending into myth. (DL X.85-7, transl. LS 18A)

We can see from the quoted passage that the main motive in explanation of the non-evident things is completely subordinated to the main aim because of which all epistemological investigation are undertaken: to free us form all false and superstitious fears. This ethical end is achieved, Epicurus maintains, even if multiple explanations of unobserved phenomena, namely celestial bodies, are allowed.[299] What is crucial is the path to freedom from disturbance is already secured if we know that there is some natural explanation of celestial phenomena and moreover, Epicurus clearly argues against any arbitrary selection of the possible explanations which are all compatible with the phenomena. But, the multiple explanations gives more than merely stating that there is *some* cause or explanation and their objectivity is guaranteed by the fact that atomism allows that some of these explanations are

[299] Nevertheless, for the ethical purposes not in all cases are allowed multiple explanations, for example, for the explanation of the real nature of things which consists of atoms and void. That is, knowledge of atomism, as we shall see later, as the only explanation of the world, is neccessary to be free from disturbance.

working in our world and others in some of many other possible worlds within infinite universe, since "for an infinite universe nothing intrinsically possible could fail to be realized somewhere".[300] And this should not be considered as something insignificant or meaningless. The importance is pointed out by Allen in the following way:

> His innovation was to construe theories first put forward in the spirit of universal explanation – as applicable at all times and in all places to natural phenomena in need of explanation – so that they apply only to some episodes of it or its occurrence in some worlds, when more than one theory is not contested by the phenomenon.[301]

However, for one particular scientific theory about the non-evident Epicurus does not allow multiple explanations: atomism. And now we are back again to the explanation of the proof of atoms and void by the methods of non-counterwitnessing. We have seen the practical usage of the methods for the other group of the non-evident, namely celestial phenomena. We have seen that the inferential step in this case does not rely, as Sextus reports, on logical entailment between the evident and the non-evident, but that the inferential step relies on the similarity between the observable and non-observable and the proof consists in checking the consistency with what is evident.

However, for atomism the non-counterwitnessing should exclude any other possible explanation and firmly confirm that the only basic elements in physics are atoms and void. Recall that Sextus in his report claims that the non-counterwitnessing is the following (or the logical consequence) of the non-evident (void) from the evident phenomenon (motion). The objection raised against Sextus was that Epicureans do not allow this kind of deductive inference and that the method of non-counterwitnessing is compatibility with phenomena. Commentators at this point directly make reference to Philodemus' work and his presentation of sign-inference in later Epicureanism. By that time sign-inference became an important topic and a matter of quarrel between the Stoics and the Epicureans. In the debate are introduced technical terms that we already met in Sextus' report: 'consequence' (*akolousthia*) and 'elimination' (*anaskeue*). These notions are explanatory notions of what is known in the debate as the elimination method, which was preferred by the Stoics. The elimination method states that "q follows from p if and only if when q is 'eliminated' p is *thereby* co-eliminated"[302]. And the major problem with Sextus' report is that it is indebted to the Stoics' terminology against which Epicureans argue and therefore wrongly equates the non-

[300] LS, 95. Cf. Lucretius, *DRN* V.509-33 = LS 18D.
[301] Allen (1998), 310.
[302] LS, 96. See Phil. *De Sign.*, 11.32-12.14.

counterwitnessing with the elimation method. Epicureans in contrast to the Stoics adopted the similarity method, which formulation I already offered. But now, we can supplement previous formulation to sharpen the difference from the elimination method. Therefore, the similarity method grounds inferences of the form "'If (or 'since') x is F, y is F', where y's similarity to x is held to make it 'inconceivable' that y should lack an essential predicate of x".[303] So, loosely speaking, the elimination method can be identified as deduction, while the similarity method is closer to inductive inference.[304] So the quarrel between the Stoics and the Epicureans is concerned with the question which of the two methods justify the transition from the evident to non-evident in sign-inferences.

The Epicureans prefer the similarity method for the reasons reported by Philodemus in the following passage:

> Those who attack sign-inference by similarity do not notice the difference between the aforementioned [sense of 'in so far as'], and how we establish the 'in so far as' premise, such as, for instance, that man is so far as he is man is mortal…For we establish the necessary connextion of this with that from the vary fact that it has been an observed concomitant of all the instances which we have encountered, especially as we have met a variety of animals belonging to the same type which while differing from each other in all other respects all share such-and-such common characteristics. Thus we say that man, in so far as and in that he is man, is mortal, because we have encountered a wide variety of men without ever finding any variation in this kind of accidental attribute, or anything that draws us toward the opposite view. So this is the method on which the establishment of the premises rests, both for this issue and for the others in which we apply the 'in so far as' and 'in that' construction – the peculiar connexion being indicated by the fact that the one thing is the inseparable and necessary concomitant of the other. The same is not true in the case of what is established merely by the elimination of a sign. But even in these cases, it is the fact that all the instances which we have encountered have this as their concomitant that does the job of confirmation. For it is from the fact that all familiar moving objects, while having other differences, have it in common that their motion is through empty spaces, that we conclude the same to be without exception true also in things non-evident. And our reason for contending that if there is not, or has not been, fire, smoke should be eliminated, is that the smoke has been seen in all cases without exception to be a secretion from fire. Another error which they make is in not noticing our procedure of establishing that no obstacle arises through things evident. (Phil. *De Sign.*, 34.29-36.17, transl. LS 18G)

The main idea of the passage is to offer a defense of the similarity method through the criticism of the opponents which Philodemus establishes by pointing out that both methods in sign-inferences depend upon similarities. Given this, the elimination method becomes admissible for Epicurean methodology. Namely, Philodemus argues, in some cases the

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[303] LS, 96. See Phil. *De Sign.*, 12.14-12.31.

[304] Asmis (1984) and Sedley (1982) hold that Epicurean inference is in fact induction. Against this argues Barnes (1996) pointing out that sign-inferences in Epicurean sense are universal generalizations which neccesitates the conclusion and as such cannot be indentified with the induction. To this point we shall turn later in the text again since the necessitation is an important element of sign-inference in securing the truth and it is indicated with the notion 'inconcievability'.

similarity is obvious and direct, as in the paradigm example of inference that all men are mortal that we infer through the evident cases of mortality of men within our experience. The inference is based on the fact that in our experience we do not face any exceptions to the premises that men within our experience are mortal, from which we are allowed then to go beyond our experience and infer that mortality is common feature to all men. So from observation of a direct similarity between men within our experience we infer that men elsewhere/everywhere are mortal. Therefore Philodemus' explanation of the sign-inference in such cases, as Asmis notices, relies on two requirements, namely, "careful observation and the absence of any evidence to the contrary" which can be considered as cases of inductive generalizations.[305] Philodemus also reply to the powerful objection made by the opponents to this kind of inference, namely that the conclusion in such sign-inferences lacks the necessity. The reason for the insistence upon necessitation lies in the fact that "were the validating link in the inference anything weaker than necessity, it might seem unjustifiable to repose so much trust in the conclusion".[306] A reply to the objection, as Sedley simply explains it, relies on the argument according to which the observed similarity between the instances "is so strong that it becomes 'inconceivable' that an essential predicate of one should fail to belong to the other".[307] The inconceivability in question secures the validity of inference although not by logical necessitation but by pointing out that the necessity in question is empirical or a posteriori necessity. According to Hankinson, "the necessity involved in the case of a true contrapositional proof is not logical, but empirical: it is only by experience that we come to know, for example, that solid bodies do not permit the transfer of liquid, and only then can we use that fact in the pursuit of further knowledge".[308]

The kind of necessitations in question is actually the same one secured by empirical reasoning (*epilogismos*) we met already in preconception-formation. Namely, preconceptions of natural kinds hold this kind of necessitation since we conceive of different bodies, such as fire or water, on the basis of their permanent properties (or necessary accompaniments) without which we cannot conceive body as being such and such body. That hotness is necessary accompaniment of the fire is calculated by *epilogismos* on the basis of repeated similar perception of the same phenomena from which we infer that all instance of that kind share the same feature and formulate the preconception 'fire'.

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[305] Asmis (1984), 204.
[306] Barnes (1996), 109.
[307] Sedley (1982), 257.
[308] Hankinson (1998), 234.

However, we see from Philodemus' report that Epicureans accept that not all sign-inferences can be established upon such direct similarity between the subject terms in the premises of transition from the evident to the non-evident and therefore for such cases allow the elimination method. The paradigm case is the inference about the existence of void. The method is the same one as we find in Sextus' report according to which void follows from motion because if void is eliminated, motion is co-eliminated by that. However, Philodemus adds an important element to this inference. Namely, he claims that even such sign-inferences are established upon the similarity. The inference in the elimination method could not even start if there were no observation of moving things and the premise that things within our experience need motion in order to move. By this move, the similarity method is established as foundational to any kind of sign-inference and moreover, as prior to the elimination method which than assures validity of the inference by elimination.

Now if we compare what has been said about later Epicurean discussion of sign-inferences with the argument for void in Epicurus' own writings it is clear these technical notions for the methods, similarity and elimination, are not part of Epicurus' own discourse. However, I want to point out that in spite of this linguistic difference later Epicureans do not abandon Epicurus original explanation of sign-inference based on compatibility with phenomena. As I have already pointed out, Epicurus claims in the *Letter to Herodotus* 40 that "if there where no space (which we call void and place and intangible nature), bodies would have nothing in which to be and in which to move, as they are plainly seen to move". It seems that Epicurus proof for the existence is in fact the method of non-counterwitnessing for the existence of void since it is not refuted by perception, but it is completely compatible with the phenomenon of motion. What is distinct about this particular proof is that the conclusion about the existence of void is the only explanation of motion, that is, motion can occur only if there is void.[309] It is the only explanation because the negation of the belief that there is void is incompatible with the phenomena and therefore that particular belief is refuted by perception or it is counterwitnessed. These cases, to which all the principles of the atomistic theory belong, differ from those explanations about celestial phenomena in one important respect: the former are the only possible explanations compatible with the phenomena, while for the latter it is possible to multiple explanations. And now, it takes only a small formal step to say that for the cases in which only one explanation of the phenomenon is possible, that by the refutation of such explanation, the phenomenon is refuted as well. Because of this it seems

[309] Ofcourse, this was not a standard view on motion. For the arguments against the existence of void see for example Aristotle, *Physics* IV.

that Sextus' report and what was later labeled as the elimination method is actually transformed Epicurus' method of non-counterwitnessing.

As far as the similarity method is concerned, it seems to me that the roots of the method again are already given in Epicurus own writings though not in such a formal way as the later Epicureans formulated. Namely, empirical reasoning (*epilogismos* and all other forms of inferential processes covered by the generic term *logismos*) in fact calculates what is given in our experience by systematizing it on the grounds of similarities between perceptions. This is the initial and most important step by which we form preconceptions, which together with perceptions serve as the criteria of truth. In other words, the insistence of later Epicureans as we have seen in Philodemus on the importance of the method of similarity captures the original Epicurus' guidance for scientific investigation given at the very beginning of the *Letter* 37-8: namely that first, we need to have preconceptions as the starting points of any inquiry and second, "we should observe everything in the light of our sensations, and in general in the light of our present focusing whether of thought or of any of our discriminatory faculties, and likewise also in the light of feelings which exists in us, in order to have a basis for sign-inferences about evidence yet awaited and about non-evident" (transl. Long and Sedley). Preconceptions are inferred on the grounds of similarities within our experience and our experience is the starting point for any knowledge of the world. More generally, by *epilogismos* we also check whether particular scientific theory is compatible or incompatible with what is evident and directly observed.

And finally, we come to notorious Epicurean idea of coupling empiricism and atomism in order to show that the atomistic theory can be justified only from sense experience, and also that the atomistic theory is the only possible way of explaining phenomena. This is the major difference from Democritean epistemology since Epicureans aims to prove that the explanation of the phenomenal world is possible only on the atomic hypothesis. The proof is based on the method of non-counterwitnessing since the hypothesis that atoms and void exists does not contradict perceptual evidence. Furthermore, it appear to be the only possible explanations of the way world appear to us as it is confirmed by many examples in Lucretius. The clearest ones deal with the explanation of properties for which Lucretius shows are dependent only upon the arrangement of atoms in bodies and structural relationships between them. Textual evidence can be found in many places in Lucretius, for example:

And we see wine flow through the strainer as swiftly as you will; but, on the other hand, the sluggish olive-oil hangs back because, we may be sure, it is composed of particles either larger or more hooked and entangled one with the other, and so it comes about that the first-begginigs cannot so quickly be drawn apart, each single one from the rest, and so ooze through the single holes of each things. (Lucretius, *DRN* II.391-397, transl. Bailey)

Epicureans thus aim to modern style of scientific explanation based on the idea of supervenience since the difference between the properties of wine and olive-oil is explained in terms of the difference in their atomical structure and more importantly, the difference in atomical structure is the one that leads to the difference in the properties they have as a compound bodies. If we want to introduce any change in the properties of some body, we must make difference in atomical configuration of that body. But we can make one step further. The explanation why some compound bodies have these particular properties and not some other is grounded in the atomic hypothesis about specific configuration and relationships between the atoms in the compound. In later Epicureanism this method of inference is called elimination.

So what gives Epicurean empiricism its distinctive character is that all sorts of explanation have to start with what is observed because perceptions are incorrigible guidance to truth. By that he puts himself on the side of foundationalists claiming that the possibility of knowledge is established in self-evident truths, perceptions and preconceptions. Knowledge nonetheless is not limited only to what is perceived, since perception can signify things which are non-evident. The transition in inference from the evident to the non-evident is established on the methods of testing beliefs, which are falsified if inconsistent with the evident and verified if consistent. Once our investigation through the specific methods of inference brings us to the unobservable world of atoms that is highly different from the world of observation, phenomenal picture of the world remains unaffected. Furthermore, phenomenal picture by that becomes finally fully accounted and not eliminated as Democritus thought. Epicurus' epistemological optimism, unique in the history of philosophy, is finally revealed in totality: world of phenomena is saved by atoms.

Conclusion

In the work I attempted to offer a positive reading of Epicurus' central epistemological claim according to which all perceptions are true. I started from the background motivation for the development of the problem of the criterion of truth which I consider as an important epistemological turn Epicurus provoked in Hellenistic philosophy. The turn is focused around the question whether knowledge is possible and if it is possible, by which means we acquire knowledge. Epicurean epistemology is therefore an investigation of the proper epistemological tool that will enable us to discriminate between true and false beliefs and by that to ascertain knowledge of the world. This is indicated by the term '*kanon'*, which implies that the task in epistemology is to provide us with equivalent epistemological measuring device with respect to truth and falsehood. Epicurus coined and introduced the term into the

debate in Hellenistic philosophy so the problem of the criterion of truth became the central epistemological discussion.

In the first chapter I argued that Epicurus' main motivation for opening the problem was the threat of the atomistic skepticism that followed from the gap between phenomenal world and the world according to the atomistic theory opened by Democritean epistemology. Epicurus was aware that the only possible way to defend atomism is through sense-experience and that is exactly what atomistic theory tends to defeat. So unlike Democritus, who accepts this consequence and rejects phenomenal knowledge, Epicurus wants to save the phenomena and to claim that these to kinds of knowledge are not incompatible. His way of defending relies on the claim that all perceptionS are infallible.

Epicurus' strategy, as I reconstruct it, starts form the recognition of perception as the ultimate and primary source of knowledge. Therefore, perception is on the list of Epicurean criteria. Perceptions are established as the criterion of truth by two main arguments. Both of them support the central Epicurean epistemological claim that all perceptions are true. I argued that in the first argument Epicurus establishes the thesis about perceptual incorrigibility by showing that other possibilities in which some or none of perceptions are true, would lead to skepticism. Since for Epicurus it is obvious that there is knowledge, the only plausible move is to accept the thesis that all perceptions are true. In the second line of argument the thesis about infallibility of perception is justified within the atomistic theory. The main idea we get from this is that perception is always caused from outside, that is, it is passive response to external stimuli. Furthermore in perception there is no any cognitive element in the sense of interpretation of what is received so there is no possibility of error. The error lies in belief. Because of this I proposed the interpretation according to which the content of perception should be understood as non-conceptual, whereas the content of belief is conceptual. The introduction of non-conceptual content explains the difference in the seemingly identical contents in the examples such as seeing tower from afar, which are in fact different. Perceptual content is true because its proper objects are *eidola* and as such it always matches its objects, while the content of belief is interpretation of perceptual content and thus is opened to falsehood. Perceptions therefore, being self-evident, are established as the first criterion of truth.

Epicurus claims that besides perceptions, preconceptions are also necessary for ascertaining the truth. As I argued in the third chapter, perception alone is not capable of telling us what kind of object is in question, that is, it tell there is something, but preconception tell us what is something. This function of preconceptions follows from the

way they are formed, as a memory of what is often seen from outside. This fits my interpretation about non-conceptual perceptual content, since preconceptions then are the link that explains conceptualization and formation of belief. Another function Epicurus ascribes to preconceptions is that they serve as a starting point in inquiry. However, the basic criterion still is perception since preconceptions are derived from perception and their self-evidence is grounded in perception. However, they serve as the criterion on their own and they are crucial for Epicurean epistemology.

Once the criteria are established we are able to test our beliefs. The testing of beliefs Epicurus explains through the methods of verification and falsification which are different for observable and non-observable things. In the case of the former objects beliefs are falsified and verified directly by perception. In the case of what is hidden from our perception this is, of course, not possible so Epicurus introduces the methods which rely on the compatibility or incompatibility with what is perceived. These methods, in which perception works as a sign of what is non-evident, are fundamental for confirmation of atomism. The atomistic theory is, as I showed in the last chapter, verified because it is compatible with sense-experience. Also, atomism is the only explanation of the phenomenal world, since otherwise it would be impossible to give an account of phenomenal world and its properties. In other words, the Epicurean shows that perceptions prove that the fundamental elements of the world have to be atoms and void. However, acceptance of atomism does not disregard phenomenal world from our experience, but in fact explains it.

We can infer two general conclusions about Epicurean epistemology. First is that epistemology in Epicurean system is subordinated to moral theory since it helps us to get rid of false belief and by that avoid disturbance and pain. Therefore its value is instrumental, which implies the second conclusion about Epicurean epistemology. Namely, Epicurean epistemology is not concerned with the structure of knowledge or its nature in the fashion of the modern theory of knowledge. The backbone of the epistemological discussion is the theory about the criteria of truth which are supposed to help us in discovery and verification of what is not evident. Given this Epicurean theory can be characterized as a proto theory of justification.

In the end it is worth noticing again that what is particularly significant about Epicurean theory is the extent to which Epicureans are ready to pursue their empiricism. The claim about incorrigibility of all perception is unique in the history of philosophy and it reveals specific Epicurus' solution of closing of the gap between the world of appearances which is subjective and the external world which guarantees objectivity. In Epicurus' view the

world of appearances is in fact the external world and therefore the gap is closed due to a perfect match between the cause of perception, *eidola*, and its content. In other words, perceptions are not subjective experiences of the world but they are in fact parts of the external reality and as such are self-evident and objectively true. And we can only imagine what the history of philosophy would look like if, for example, Locke had understood Epicurus' theory of phenomenal knowledge in this way.

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