



New Contradictions of Economic Thought in the Works of Jean Charles Léonard Simonde de Sismondi – Demonstration of the Dangers of Relying on Sismondi for Public Policymaking

Florent Pirot

Maria Mezhenaya

Claire Lavin

ABSTRACT

This article provides an elaborated view on why Sismondist theories are incompatible with logic. Sismondist ideas present several contradictions that make Sismondist views incompatible with economic policy. Praxeology, inspired by Henri Fayol's concepts of the private company organization, leads to the economic demonstration of the impossibility of Sismondism as an ideology. Technology is also shown to be for instance vastly superior to Sismondist antitechnologism up to the issues most at heart of Sismondi : military self-defense and agriculture, including in the traditional sharecropping areas that have inspired Sismondi. An alternative, Democratic-Republican view based on anarchocapitalist principles that covers military self-defense of the society as well as economic organization and social welfare is presented at the end.

The developments in pro-Sismondist sentiments in the last years require a consistent dismantlement of Sismondist views, based mainly on modern economics and logic. Praxeology as defined by Henri Fayol leads to the theory of a business leader who plans, directs, organizes, coordinates and controls. There are fourteen principles of Fayolism : work division, authority, discipline, unit of command, unit of direction, subordination of particular interests to the general interest of the company, centralization, hierarchy, order, authority, equity (wage on merit), stability of personnel, initiative, union of the personnel*. Sismondi presents an alternative view of economical organization, that has many features of Fayolism but that does not fit all, and that represents an elaborate way of developing workers' rights and to promote consumption against Say's Law. Demand views of Sismondi lead to a new paradigm embodied by his New Principles of Political Economy, certainly the first non-classical paradigm published to contradict the early Classics, quoted in Karl Marx's Manifesto. The Manifesto mentions Sismondi as father of petit-bourgeois socialism, and denounces him as such, and Lenin pointed to him as a romantic author. Ludwig von Mises mentioned Sismondi as father of the economics of national-socialism. These points are paradoxically not incompatible as nazism presents a romantic point of view on society where workers and soldiers are associated by bounds of race and hence dream on their bodies' peculiarities, affording specific relations reinforced through war. The homosexuality of Röhm, the father of the SA, contradicts indeed the homophobia of Nazi ideology developed as soon as in 1929 in

* This does not mean trade unions, as specified by the author.

the Nazi programme. Sismondi also presents early signs of this organization of thought through his militarization of society, implicit with his militia programme, his reliance on force for agriculture and his interest for war in general, especially inbetween the Italian republics and in the Middle Ages in general, with a specific interest for crusades, and also latent antisemitism as well as racism against other peoples outside the Mediterranean. Sismondi presents a strange mix of national views and of an historicist-led attempt at demonstrating that neoclassical views can be countered. In a certain perspective, Sismondi can be dubbed antiromantic (by defining the peaceful way of trade ie. “doux commerce” promoted by Montesquieu as romantic, even though Lenin will later find Sismondi to be even too romantic for him) but production gluts can be solved naturally through natural ways, e.g. recycling by new, more innovative entrepreneurs, of existing resources excessively supplied by the market at some point into products more adapted to the market, and defining them as a problem lays already the question of planism. Why not consider market gluts as consequences of market intervention of governments who interfere with decision-making of actors and create uncertainty through frequent, unannounced changes of public policy, for instance ? This Austrian view of economics is consistent with the formation of economic gluts without sollicitating the problem of excess of demand, a question that creates the threat of overplanning and of consumption control. Sismondist control of economic development through prohibition of technological advances is a form of consumption control, as business consumption is also part of the general demand, and end-of-chain consumers also demand technological goods that Sismondist economics cannot provide at all. Indeed Sismondi clearly bans industrial technologies and denounces them as “expropriation of workers” by “big companies”[†]. The negotiation on the name of workers by salary wages and the enouncement of salary economics by Sismondi leads the way to an expropriation of companies, later, under guidance of Marxist principles.

The proposals of Sismondi on the proportionality of income wage with exemptions on low income, the abolition of revenue stamps and of consumption taxes are a priori seducing. Can they lead to a republican system for organization of political economy ? This egalitarian idea is tempting. It represents a desincitation to enrichment that could nevertheless be obnoxious to social progress, so long as wealth distribution be really proportionate to social merit. Indeed, it is possible to imagine extractive wealths, linked to spoliation activities (and not of extraction of mining or hydrocarbon resources, that in general benefit the whole of society as raw materials, and bring for oil and natural gas as well as coal[‡] CO2 essential for agriculture[§], and to respiration through the dioxygen produced by photosynthesis), as described in [2].

[†] For instance : «les entreprises de bateaux à vapeur, de diligences, d’omnibus, de chemins de fer, qui à l’aide d’immenses capitaux remplacent toutes les mesquines industries des bateliers, des voituriers, des charretiers indépendants. Chacun de ceux-là possédait un petit capital, il était maître; tout le travail au contraire des grandes entreprises est fait par des gens à gage, des prolétaires. » ([1])

[‡] Especially after extraction of alpha emitters.

[§] Read also [2] as concerns anthropogenic climate warming, for a confirmation of its anthropogenic nature demonstrating nevertheless that CO2 and water vapor are solely the track of a phenomenon explained in reality by industrial, human heat emissions under dome of volcanic tephra – confirming by artificial intelligence the results already presented in [3].

These activities are in principle sanctioned regularly by natural disasters, as explained by the article quoted above. It is hence possible that the distribution of incomes be not proportionate to social merit and destabilizes the republican, meritocratic order. In this case, the ideas of Sismondi are tempting, and would also serve to more economic development. For instance, a company of social networking funded by its advertisements, relying on a large public, could indeed benefit from tax waivers on the poorest to see an increase of its demand of advertisement services for this class of the population, benefiting hence from a higher demand of advertisers interested by this public “enriched” by the tax waivers. This theory is interesting. In the opposite case, of a meritocracy ensured by the market, these exemptions are absurd, and revenue stamps are even thinkable, as well as taxes (obviously not proportionate to income) on consumption, that exercise a particular weight on the poorest, that save less. What are the distortions on the market that exist currently, that could permit to justify of these application of the ideas of Sismondi on this particular domain, abstraction made for instance of the antitechnologism of Sismondi that condemns firmly the social network technology of populations that represents the added value and profit source of the company taken as example above ? Crony capitalism represents certainly the principal threat in modern liberal societies. Crony capitalism is a system in which the companies chosen by the political power, in exchange for particular services that they offer escape for instance to the pressures of the authority relative to a change of regulatory context in which these companies evolve, bringing to these companies a relative freedom representing a true competitive advantage. The companies can for instance, in a certain case, bring sexual services to the leaders of the leaders, services of spying, of torture, and other forms of police support to the power in place. The cases in which spying services benefit to the common good are obviously excluded, as anarchocapitalism is still difficult to conceive wholly albeit this question will be discussed below in length. In crony capitalism, companies can benefit as well of gifts from the power in place, e.g. through “retrocommissioning”. The system of retrocommissioning allows the most corrupt companies to access the best markets^{**}. These practices allow the establishment of *unfair inequalities* in society, that in principle natural justice ([4]) can sanction on the long term ; nevertheless, it may be of the interest of society to not wait that earthquakes, volcanic eruptions, Cm247 / Pu244 fireballs or even floods^{††} (non-

^{**} By increasing the bill and restituting to the politicians directly as gifts or black funds the excess. This felony is condemned by 20 years of hard jail in the United States of America for instance.

^{††} As concerns floods, the spatial variations in rise of water related to anthropogenic climate warming have been noted in [5], confirming in another way its anthropogeny. The article in question shows in 2017 a weaker pattern of sea rise near Norway, a more equalitarian country than in other countries of the area, because of its more redistributive social policies. Let’s note that Belgium is shown in [5] to have a higher comparative sea level rise than other countries of the area. See also « Ongelijkheid in België groter dan verwacht (als je ook naar het vermogen kijkt) », Steven Rombaut, VRT News, 29 Nov 2024 <https://www.vrt.be/vrtnws/nl/2024/11/28/ongelijkheid-in-belgie-groter-dan-verwacht-door-ongelijkheid-bi/> - in this article it is shown that inequalities in Belgium have overreached in 2021 those of the United Kingdom and those of the Netherlands (as well as those of France), based on the source BE-PARADIS, World Inequality Database. ChatGPT agreed that « Inequality can affect where people build, how well they prepare, policy responses, adaptive infrastructure, etc. So more unequal societies might suffer more from a given sea level rise. ». See also annex for a more complex development on this. Grassroots crematory activities associated to stealing of goods of the cremated may explain hidden inequalities since goods stolen are never reported into official statistics by the new owners. The Bundeskanzler of the Federal Republic of Germany Friedrich Merz is thanked for his information on the fact that mobility of population (use of cars for instance for general mobility, travel) varies and that around Hamburg for instance there is less average mobility. Crematory / mash antigravitons related to grassroots

exhaustive list) happen to establish protective measures. The measures proposed by Sismondi may represent then a sort of self-protection of society against natural disasters but there are several arguments against. Antitechnological sismondism and ab terrorem [6] clauses in Sismondi's work lead to crematory plutogenization and to tornadoes and hurricanes through crematory antigravitons [7]. Besides, antitechnological sismondism and protection against hurricanes lead to massive stone building which is itself favorable to land subsidence and hence to floods. London may appear as an exception to earlier issues, but the use of composite materials for construction and the excellent control of crematory activities by police forces in general, well-trained for that, explains the excellent linear trend result for the Greater London area in [5]. Technological innovation may hence represents a better way to prevent natural disasters than Sparta-like equalitarian societies involving a strong condemnation of crematory systems, and in addition to that it is clear that modern technologies are quintessential to the detection of crematory systems that are a key element of land subsidence (see again footnote 6). For instance, for the detection of proton thresholds in plutogenization related to the crematory / mash nature thereof. Hence it is clear that while sports-based CO₂-based clean plutogenization is tempting^{‡‡}, modern technologies are quintessential for security and also for long-term protection of such a society that will suffer necessarily from respiratory issues because of the crematory fallout coming even from nearby crematory activities or from their deliberate attacking with crematory weapons because of the accusation that they are sismondist and pure talion law. Trachea clogging is a direct consequence of crematory fallout^{§§}. The lesser possibilities of crematory monitoring in Sismondist societies related to their antitechnologism leads also structurally to more grassroots crematory activities.

The question of the true contradiction between the company of services taken initially as example, relying on advanced technologies, computer technology, and Sismondi's ideas of opposition to technological development to create more jobs and develop physical force as well as jobs should be obvious. The capital of a company is among other things intellectual and constituted of technologies that are a key in its economic production (in its added value) and basing a service economy with capabilities for self-support without advanced technologies with as sole capital an enormous workforce is difficult or even impossible, except for basic activities such as housecleaning^{***}. The meeting elaborated between Sismondi

crematory / mash activities explain clearly this result. The weight of crematory systems, above average of standard nuclear systems for the same energy yield (the Bundeskanzler of the Federal Republic of Germany Friedrich Merz is also thanked for confirming this point) leads to the idea of the higher land subsidence in these areas. Stealing of goods in Auschwitz-Birkenau and in other Nazi KZs is a simple example of this (the Bundeskanzler of the Federal Republic of Germany Friedrich Merz also points out the fact that Nazi death camps suffered from soil collapse).

^{‡‡} With a mix of 70 % CO₂ and 30 % air.

^{§§} It has been observed by Blaise Metreweli in Ukraine on the side of Ukrainian fighters, especially in 2022 and early 2023 before the Sunflower cement plutogenization [8] was largely deployed.

^{***} Turkmenistan, Uzbekistan (Blaise Metreweli is thanked for that point), Paraguay and the Rongghyun (DPRK) are examples of this situation. In Paraguay and Rongghyun, chemical production is highly oriented toward crematory activities. Nevertheless, the latent Sovietism in the DPRK leads to more technological systems than pure sismondism and Paraguay seems to take its name too seriously as concerns the crematory-homosexuality loop [9].

and Marx, in 1842, eventually aborted⁺⁺⁺, translates already the premarxist nature of the final works of Sismondi, far from his initial attachment to property goods and even of his firm condemnation of the assignats system⁺⁺⁺. Sismondist economy is characterized by an implicit or even explicit insistence to work value, forgetting implicitly the various capitals brought by the entrepreneur, including for instance his / her anticipation of market demands, his / her technological innovations, and his / her capacity to direct the workforce with success, avoiding strikes, for instance, and managing his / her company efficiently (see also H. Fayol's model in the introduction).

Are polyculture and manual work constrained by hilly regions, because of their topography ? Can agricultural workers really not depend on markets for their consumption through sharecropping ? Why in this case Sismondi is so attached to property rights, if he wants to implicitly exclude a part of the population from markets implicitly through sharecropping ? Sharecropping represents indeed another apparently tempting proposal of Sismondi. Sismondi proposes to redistribute implicitly property without touching primary property rights, but through affecting of a weight the *usus* through sharecropping, imposing to agricultural landowners the employment of workers to ensure them a guaranteed job in exchange of an incentive to production, their own food income being ensured by their work capacity. This complex system incites in appearance agricultural workers to production while ensuring them a stable job. It represents a veritable temptation. Is it really functional ? It would be possible for instance to replace CO₂ emissions of natural gas, oil and clean coal^{§§§} through the breath of numerous agricultural workers working in fields, and to replace the use of pesticides through massive manual work. The last subject was already discussed in-depth in [11]. The relative dangerousity of pesticides led to a debate, sublevated notably in [12]^{****}.

⁺⁺⁺ For this information on the aborted meeting between Sismondi and Marx, the White House is thanked and the SIS as well for the help to the White House on this (files of the SIS allowed the White House to discover the meeting hidden in a *cahier de notes* de Sismondi and of another on Marx's).

⁺⁺⁺ Sismondi denounced the guillotine as form of monetary re-emission, that it indeed permitted temporarily before the hyper-inflation crash related to the re-emission system, as soon as Summer 1794, peaking in 1795 [10].

^{§§§} Expurged from their NORMs i.e. alpha emitting nanoparticulates.

^{****} See also [13] for a presentation in conference. In both cases it is demonstrated that alpha emitting nanoparticles are the key responsible of the effects of a several pesticides on health, these transforming the effects of alpha emitting nanoparticulates on human health without transcending them. It is the same on plants as for instance for organochlorinated pesticides, as in [11] «It is proposed, in conclusion, that the effects of the pesticides that do not include incendiary agents (such as phosphorus), Chlordecone and Dicamba for instance, entirely come from tap water radioactivity (and hence vary strongly depending on the location) ». This is confirmed by the discovery of cation chloride channels in plants – see for instance [14] : « Cl⁻ is essential for chloroplast function ». Hence it is clear that alpha emitters penetrate deeper in plants thanks to the cation-chloride channel, as in [15], for in-depth effects. The resistance of human bodies to neutrons of all speeds, suggested already in [16] leads as well to the same theory in plants and confirms as well implicitly the above statement from [11] – there is no chemical reaction in between plant cells and chloride, the issue is the cation-chloride channel (all the energy of the chemical reaction is absorbed during channeling as it is just enough to bring the chemical to the target, as the body can sense it naturally during salt consumption for instance – this has been confirmed by the AI of the Kremlin, of the Republic of Bharat, of the Göryo-San, of the Elysée, and of the SIS) and alpha emitting nanoparticulates ; sulfur and nitrogen are even used for fertilizing. The AI of the Kremlin, of the Republic of Bharat, of the Göryo-San, of the Elysée, and of the SIS also confirm that effects of pesticides such as chlorpyrifos and Dicamba vary wildly depending on the area, in a way only related to background radioactivity. Areas of hills are usually exposed to higher natural radioactivity than plains and mountains because they usually correspond to plume magmatism. These areas are hence nefarious to health and make also the

The article [11] showed a propensity of organic agriculture to produce hand diseases on workers. The system of work through human physical force is developed by Sismondi also with the purpose of developing military capability, contradicting the Lipsey-Lancaster principle, according to which a single policy cannot have two separate aims at the same time (here job creation and military training) without collapsing on the long term into full inefficiency. Indeed, the fact of wanting to create jobs while developing as well physical force through the same medium (sharecropping) condemns this policy to sterility on the long term. This policy favouring implicitly machism condemns also women to social despire, while Sismondi eulogizes implicitly hand work for activities such as silk production (nevertheless a niche production). An intermediary case is olive harvesting and olive oil production, where both men and women can be employed a priori almost independently, except in the pressure work in the Sismondist case albeit foot pressure systems are also appropriate for women and allow to hire more staff. In the second annex, a case for robotic work is nevertheless presented through discussion with ChatGPT. Quid of mass consumption necessary for the developing of a numerous population implicitly facilitated by tax exemptions on the lower classes suggested beforehand by Sismondi ? Sismondi condemns proliferation of births in Ireland implicitly and explicitly by denouncing worker misery and suggesting that “population proliferation” in Ireland is a great threat to society, recommending emigration and valuation of unexploited land for agriculture through marsh fixture with lime spreading and use of marine debris [17]. While not going so far as recommending direct population control there, he met Malthus after his wedding with Jessie Allen (in April 1819) and Malthus wrote (in 1821) to Sismondi that « there were many parts of the subject on which we should not disagree » [18]. The problem of mass consumption remains absent in the works of Sismondi, not at all dealt with. This is also pregnant in his condemnation during a certain period, in 1819 in the *Nouveaux principes d'économie politique*, of out-of-marriage births [19] : it is only under social pressure of other economists that he withdrew this view from later works⁺⁺⁺. In other words, Sismondi has not dealt with the production glut issue that he condemns and in addition to that seems to be willing at some points to reduce population growth, at least relatively by sending workers farther away (but he should have acknowledged openly his mistake on birth control in later works, which he did not). He fosters indeed at some point what he wanted to fight, i.e. the production glut. In no way he understands that. He ignores the need for entrepreneurs to produce market goods to answer the added demand produced by his wage policies. Convinced like Malthus of the need to question Say's law, he tries to escape instead to the problem by proposing alternative solutions to production, such as sharecropping and agricultural improvements, that present

growth of medicinal plants more difficult because the soil is less fertile. Hence the implicit need for more pharmaceutical drugs already suggested in [11], the related reduction of bees and other insects hurt by related car traffick (the Elysée confirms through statistics a circa 7,5 % increase of insect loss because of this) and the impossibility of the self-sufficiency promised by Sismondi for sharecroppers together with the need for heavy pharmaceutical industries and neutron treatment (as well requiring advanced technologies, aluminum at least used for primitive neutron sources in soda cans being produced in mass electrolysis and soda cans being produced within heavy industries. Sismondi condemns even industrial production of wood kegs in [1] : « devant les fabriques de tonneaux de la Loire, qui rendent inutiles les tonneliers »).

⁺⁺⁺ « In the closing chapters of his 1819 edition Sismondi recommended the prohibition of undesirable marriages as a means of birth control; but this measure met with so great opposition from his contemporary economists that he omitted it from his later books. » - page 93 of [17].

inherent long-term limits such as the fixed grounds of Earth and the reduction of agricultural production through low-technology sharecropping – the invention of the powerful horse-reaper system for harvesting by Cyrus McCormick in the 1830 freed five men for each reaper for military service in the United States of America [20], a result contradicting directly Sismondi's theory, the last note found in his *cahiers* before his death in 1842⁺⁺⁺, suggesting clearly that the information killed him. As Marx mentioning in his introduction the concept of subjective value in the introduction of the Capital, while rejecting it openly, Sismondi sinks already in clear contradictions. The method of Sismondi can be deemed tantamount to expropriation. Landowners can also innovate beyond olive production in hills, where the Sismondist model appears most appropriate, as in Tuscany and somehow in the Emilia-Romagna, in spite of the appearance of need for manual work and force. Modern technology can allow the set up of stones used for *restanques* with excavators on walking excavators used also for heavy irrigation work (irrigation has been shown by Sismondi to be a key element in Tuscany [22]) and motorized rails / funiculars for their transport as well as for the transport of wooden crates for harvest displacement. Is it possible to wage war with solely the strength accumulated through agricultural work ? It is clear that agricultural works lead to specific body movements that are not necessarily those of a soldier. Drone wars prove that the capacity of stone moving or of olive oil pressure do not necessarily teach efficiently to make war, far from this. In tanks, new shells without depleted uranium (with clean plutonium tips) weigh more than half the weight of depleted uranium shells^{§§§§} and pedals also need no strength since 1937. Even demining, precise science, cannot really spill from an active practice of hand weeding given the precision required for the manipulation of explosives. The carrying of heavy weights may also lead to the cult of depleted uranium weapons, particularly heavy in general (up to 200 kilograms for a single shell^{*****}) in spite of a limited efficiency. The conurbation between aryanism and the agricultural concept behind nazism (already evoked in [6]) leads also to the development of the preceding point into a crematory process.

It is clear that the Unitarian Protestantism of Sismondi is opposed to the heart of the Catholic doctrine. Trinity is at the heart of this theology. Sismondi exchanges frequently with William Channing, another opponent to Trinitarianism in the United States of America, and pioneer of pacifism. This last point contradicts wholly the militarism of Sismondi. Did Sismondi understand that ? Sismondi tries to find *national-specific* answers to the issues of Catholic countries, without noting really that Northern Europe countries are more developed, seen as appropriate for specific agricultural systems, having a share of originality but having never shown a true economic efficiency. Isn't Sismondi self-contradicting by the success of Venetia related to its "extreme prudence", its subsistence "during more than 1000 years", "solely agitated by a few civil wars", having "prevented all conspiracies before their explosion, avoided all revolutions" with a "policy (...) constantly joyful" that "increased its wealth, its trade and industry, and imprinted to all its neighbours fear and respect" while arguing that all

⁺⁺⁺ The source is the President of the United States of America Donald John Trump as well as the Vice-President of the United States of America James David Vance.

^{§§§§} The information comes from the President of the United States of America Donald John Trump and is confirmed by Blaise Metreweli and by the Elysée.

^{*****} An information from Blaise Metreweli confirmed implicitly by the Elysée and by the President of the United States of America Donald John Trump.

these advantages were not “caused by true freedom ; because this one wasn’t well known in Venetia, but to the republican form of its government, to the prudence of its senate, way superior to that of a prince, to its unwavering constancy, to its economy, that accumulated without relapse the treasures that the prodigalities of a young court would have dissipated, and to the devotion for the public thing of the less numerous class, but rich and decorated of great talents, to which the public thing belonged” [19] and by recommending at the same time quasi expropriatory, sometimes wholly expropriatory agricultural policies, contradicting the traditional property rights, and hence deemed revolutionary ; in addition to what he calls for militia establishment in 1836, in a way clearly inspired not from the Second Amendment of the Constitution of the United States of America but from the history of the Roman Republic in particular and of Medieval Italy and of the Crusades. His point is to favour the fight for “free constitutions” but also implicitly for sharecropping. In other words Sismondi presents himself as antirevolutionary but as soon as 1808, he supports expropriation through “violation of laws”++++. His planned meeting at the end of his life with Marx was certainly the paroxysm of that, the meeting planned solely could not happen because of Sismondi’s disease. Sismondism prefigures in fact Maoist agrarianism in addition to Nazi economic policy (a theme developed in [6]) – Maoism in particular relies theoretically on peasants while Leninism relies on workers albeit Mao tried later to involve peasants into industry making through the Great Leap Forward and through the massive expropriation of peasants by the Red Guards armed by the Party.

Did Sismondi try to “sink down” catholic countries into underdevelopment by condemning industry in these countries, to the profit of Protestant Switzerland in which he was an elected member of the Geneva municipal council. This has been actually confirmed by official Swiss-based research++++. How can anarchocapitalism be an alternative to Sismondist ideas as regards economic development and growth ? This first question has to be addressed in regard to the comparison with the biggest country where policies have been historically partly derivated from Sismondism, Communist China. Nowadays crony capitalism is a particular issue in China, that has been shown also to suffer from terrible land subsidence issues (see annex 2). This leads to considerations on inequality development and Sismondist views, that are implicitly key in the mix of capitalism and marxism of the Chinese way of development. Can China be fixed with anarchocapitalism e.g. can pollution be reduced there, inequalities reduced as well, and in summary sustainable economic growth achieved ? May this new model also be exported elsewhere ? China has developed itself through free trade, especially through long distance exports of elaborated, high quality goods such as ceramics and silks. Sismondist policies have turned China into a mass producer of low-end goods with a limited internal market. Technologies are fostered only through copy of foreign goods, be it in the computer sector or in military matters for instance.

++++ « And who doubts that laws should be violated, when laws are solely the expression of the will of a usurper class which would have deprived the nation of its heritage ; that property, which has no other guarantee than social contract, would be considered as giving the right to destroy all the guarantees that the social contract has guaranteed to all citizens » - quoted in [6].

++++ The information comes from the Ambassador of the Helvetic Confederation in Austria Friedrich Storzmeier.

Barriers to trade can be reduced through public-private partnerships without high government involvement. The consideration of government involvement in these policies needs not be addressed. Indeed, there are strong drawbacks to government intervention in public-private partnerships i.e. governments can seduce companies into public-private partnerships and then extract from them monies, services (as in the above criticism of crony capitalism) but judges without executive powers may be left sole rulers of public-private partnerships i.e. represent the sole public actor within. Nobility leads to this practice. Alternatively, assemblies involving the whole population, gathering on a public place, may ballot the election of such a judge, in exchange for a small payment, flat (not income-related), used to fund the activity of the judge later. Nuclear weapons allow to resolve simply the issue of the militia by eliminating this problem and these weapons may be entrusted to a judge. Consumption taxes should fund nuclear weapons and they may be raised by a militia for non-cooperative industries. The militia may rest on a clause such as the Second Amendment of the Constitution of the United States of America. Judges may preside over caserns where the militias be gathered from time to time, e.g. once a month, for control of the will to participate to collective defense of the militia and social networks may be entitled with the right to provide judges with eavesdrops that allow to discriminate between those interested by self-defense and those uninterested but wearing weapons. The uninterested wearing nevertheless weapons should be water-sodium-mashed [23] for plutonium upon orders of the judge only^{§§§§§} but this should not be the sole production of plutonium and neither should the “banklagmash” [24] system that also fixes fiat money issues and has also to involve water-sodium-mashing and not simple sodium-mashing, clean plutonium should also be produced (e.g. Sunflower cement plutonium [8] or Water motor plutonium [25], with also the possibility of iron powder and CO₂ mix instead of salt in a 30/30/30 ratio) so that there be no path dependence on the earlier forms of plutonium, that have to remain exceptional. No one should be compelled to participate in the militia and should simply relinquish weapons then. Besides, non-cooperative industries may be simply excluded of the nuclear umbrella as many weapons (in a perspective of mass retaliation) are very precise and destructive as well, so no retaliation may be thought for companies and private individuals refusing to participate to the funding of the nuclear umbrella (or of standard armed forces built out of the militia). A women’s council has to be thought for issues of rape, where partial injections of uranium / thorium may be decided for the killing of rapists in the water-sodium-mash pattern in caserns, as rapists are expected to be pseudomilicians. A mutual system of retirement allowance without compulsory adhesion with in parallel private capitalization funds is easily thinkable. The mutual system may simply rely on a strict redistribution to the elder of the sums taken on wages of younger individuals, in proportion of deliberate social contributions. A small administration council funded on the system is established through the contract for running it. For sickness insurance as well such a system may be thought. Medicinal plants have shown their great efficiency for many diseases, beyond the large spectrum of cannabis. This may be managed as well through conservative investments by a private fund run out of profit. This

^{§§§§§} What about pseudomilicians that are not loaded enough in alpha emitters for allowing correct plutogenization ? This individual is expected to be willing to eliminate a lying judge. Banklagmash is a resource for this since the judge threatens the stability of the economy and hence the continuation of trade issues from which the bank benefits naturally. This is why banklagmash should preferentially be stored and sold at high price.

presents some more dangers for the participants but also allows better incomes later. A combination thereof is also possible.

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ANNEX 1

Extracts of the exchange with ChatGPT on land subsidence and variations in sea level rise based on social inequalities :

You raise a good point — comparing e.g. Norway, which has high income equality and is oil-rich, to other places where inequality is greater, suggests the relationship between socio-economic inequality and observed relative sea level rise is not simple. The science indicates that land motion (uplift or subsidence) plus climate-driven sea level rise dominate, and human socioeconomic factors aren't an obvious primary driver at macro scales. Here's a breakdown:

*That's an excellent and nuanced question — and **yes**, in some cases, **human industrial activity can directly or indirectly contribute to local land subsidence**, which in turn **amplifies relative sea level rise**. But this is usually local, not global, and is one of several interacting causes. Here's how it works, with examples and limits:*

☑ How human activity affects sea level rise via land subsidence

1. Groundwater extraction / aquifer depletion

- Pumping groundwater lowers the water table and can cause land to compact and sink.
- This is well-documented in places like:
- Jakarta, Indonesia — sinking up to 25 cm/year in some places due to groundwater pumping.
- California's Central Valley — major subsidence from agriculture-related aquifer withdrawal.
- Bangkok, Thailand — same pattern.

☑ **Result:** Relative sea level rise is worse because land is sinking faster than the ocean is rising.

2. Oil and gas extraction

- Removing hydrocarbons from underground reservoirs can lead to compaction of rock layers, causing subsidence.
- Documented in:
 - Houston-Galveston, Texas — oil, gas, and groundwater withdrawal linked to land subsidence.
 - Parts of the North Sea basin — though extraction here has caused limited, localized subsidence.

☑ Effect is again an **amplified local relative sea level rise**, often alongside risks of coastal flooding.

3. Urbanisation / industrial loading

- Adding large buildings, heavy infrastructure, and urban sprawl can slightly compress soft soils.
- This is usually a much smaller contributor compared to fluid extraction, but in soft deltaic regions, it can matter.
 - For example, Tokyo and parts of Shanghai experienced land sinking in the past, partly due to urban/industrial loading (combined with groundwater use).

⚠ Important distinction: Absolute vs Relative sea level rise

- **Absolute sea level rise** = the actual rise in ocean surface (mostly from climate change: melting glaciers, thermal expansion).
- **Relative sea level rise** = what people experience on land (a combination of ocean rise + land movement).

Human-induced subsidence only affects relative sea level rise — it doesn't cause the oceans to rise globally, but it can make them feel like they're rising faster in specific places.

☑ Is this relevant to the UK (e.g. Scotland, England)?

- In most of the UK, **glacial isostatic adjustment (GIA)** is the dominant land movement factor (post-Ice Age "rebound").

- There's **limited large-scale subsidence from human activity**, though localized effects may exist in:
 - Areas of historic **coal mining** (e.g. parts of northern England, South Wales).
 - **Oil & gas fields** offshore in the North Sea (some subsidence risk has been modeled, but not widespread impact on land).

So yes — human industry **can** cause local sea level rise via land subsidence, but in the **UK context**, it's less dominant than GIA or climate-driven ocean changes.

☒ Conclusion

Yes — **human industrial weight and activity can cause land to sink**, which makes **relative sea level rise worse** in certain places. However:

- It doesn't raise global sea levels (only local ones).
- The most serious cases are where **extraction (not just weight)** is involved — groundwater, oil, gas.
- In the **UK**, natural land movement (post-glacial rebound) is usually more important, but past or ongoing **industrial extraction** may contribute to localized effects.

If you're interested, I can show a global map of hotspots where human-driven subsidence is worsening sea level rise. Would that be useful?

This is contradictory with the results in AGU's JGR 2017 article <https://agupubs.onlinelibrary.wiley.com/doi/full/10.1002/2017JC012907> that shows a weakest sea level rise in Norway, a heavily oil dependent country. Wouldn't social / income inequalities be a better way to understand sea level rises ? Since Norway is also the most equal country in the area. There is also data on Belgium (a priori low Gini country) that shows an actual level of inequality above it. <https://www.vrt.be/vrtnws/nl/2024/11/28/ongelijkheid-in-belgie-groter-dan-verwacht-door-ongelijkheid-bi/>

What the studies show about Norway (and similar cases)

- A study *Observed Sea-Level Changes along the Norwegian Coast* (Kristian Breili et al., 2017) examines tide gauges, GNSS, levelling to get both *relative* sea level rise and the rate corrected for **glacial isostatic adjustment (GIA)**. In many parts of Norway, land is rising (post-glacial rebound), which offsets sea level rise. (MDPI)
- After correcting for GIA, the coastal average sea level rise for Norway in the period 1993-2016 is found to be about **3.5 ± 0.6 mm/year** (or ~3.2 mm/yr without inverse barometer correction) which is comparable to global rates. So the *apparent low rise* in Norway (in relative terms) in some locations owes a lot to land uplift. (MDPI)
- Thus, just because a country is oil-rich or more equal doesn't mean it experiences *low absolute* sea level rise; it just may experience *lower relative sea level rise* in places where the land is rising.

On Socio-Economic Inequality as a Predictor

The idea that inequality might correlate with more subsidence (or more exposure to sea level rise) is intuitive, but the empirical evidence is mixed. Here are some reasons why

socio-economic inequality is *not* clearly or directly predictive of relative sea level rise in many cases:

1. Dominance of geophysical factors

- Post-glacial rebound / glacial isostatic adjustment (GIA) is huge in northern Europe. Where land is rising, even a large sea rise can appear small relative to land. Where land is sinking, relative rise looks large. These effects can swamp many human contributions.
- Tectonics, sediment compaction, local subsidence (from groundwater extraction, etc.) do matter locally, but globally they're much smaller or very spatially focused.

2. Human driven land subsidence is very localized

- Subsidence induced by extraction (water, oil, gas) or by loading (heavy constructions) is real, but mostly concentrated in specific regions (deltas, urban areas, etc.).
- The scale of human-driven subsidence tends to be small compared to GIA in places like Norway or Scotland (in many coastal areas), or else very localized.

3. Socio-economics influence exposure & vulnerability, but not the physical rate in most cases

- Inequality can affect where people build, how well they prepare, policy responses, adaptive infrastructure, etc. So more unequal societies might suffer more from a given sea level rise.
- But the rate of actual physical sea level rise + land movement is mostly driven by climate processes + Earth/land geophysics, not human income inequality per se.

My Conclusion

I don't think income or social inequalities by themselves are a *better physical predictor* of sea level rise (especially *relative* sea level rise) than geophysical factors (like GIA, local subsidence, tectonic motion). However, inequality is very important for **how badly people are affected**, for adaptive capacity, for where infrastructure is vulnerable, and for who suffers most from flooding, sea level rise, etc.

So:

- If by "sea level rise" you mean *relative sea level rise experienced at the coast*, then geophysics (land motion) are the key drivers, often overwhelming socioeconomic factors.
- If you mean *impacts* of sea level rise (flooding, displacement, economic harm), then yes, socioeconomic inequality plays a big role — who can afford living in high ground, who can afford protective infrastructure, etc.

If you like, I can look up a dataset correlating inequality (Gini etc.) with measured relative sea level rise across many regions, to see if there *is* any consistent statistical relation. Do you want me to try that?

I agree wholly with the following point : "Inequality can affect where people build, how well they prepare, policy responses, adaptive infrastructure, etc. So more unequal societies might suffer more from a given sea level rise." It corresponds with ideas of natural justice exposed in <https://pubs.sciepub.com/ijp/7/4/4/index.html> based on the ideas of Acemoglu and Robinson on extractive development. What do you think ?

That's a very thoughtful synthesis. I think the idea of combining natural justice / distributive justice (inequality, extractive vs inclusive institutions) with physical vulnerability (sea-level rise, land subsidence, etc.) is very promising. There are both conceptual strengths and practical challenges. I'll lay out how I see the connection, what supports it, what limits there are, and what it might suggest for policy or research.

What the natural justice / extractive-inclusion idea is

- Acemoglu & Robinson's framework (e.g. *Why Nations Fail*) distinguishes **inclusive institutions** (broad political participation, rule of law, broadly shared property rights, relatively even distribution of power) from **extractive institutions** (where elites extract wealth/power from the population, suppress dissent, have less accountability, etc.). ([Wikipédia](#))
- Natural justice or climate justice literature often holds that harms (like sea level rise) are not distributed equally, and often those with fewer resources or less power suffer more — regardless of who contributed most to the causes of climate change. So, how institutions distribute both benefits and burdens matters a lot.

The intersection you suggest is that inequality might not only shape **how badly people suffer from sea level rise**, but also shape **how much exposure they have in the first place**, how much capacity to adapt, how much mitigation is done, etc.

Evidence / arguments in support

Here are reasons I think the idea is strong:

1. Vulnerability depends on wealth, power, governance

- Poorer communities often live in more hazardous areas (floodplains, low-lying coasts) because land is cheaper, regulation is weaker, or relocation is unaffordable.
- They often have less infrastructure, lower quality housing, weaker sea defenses, and less ability to invest in protection.

2. Adaptation and mitigation depend on institutions

- Inclusive institutions generally lead to better public goods provision, better enforcement of planning laws, stronger social safety nets, and more democratic decision-making, which can mean flood defenses, early warning systems, etc., are better deployed or more equitably distributed.
- Extractive institutions may favour elites: e.g., wealthy coastal real estate gets defended first; poorer communities get delayed or neglected.

3. Historical injustice & cumulative disadvantage

- Inequalities tend to accumulate: communities with fewer resources already have poorer infrastructure, less political voice, and fewer buffers; climate harms can worsen those inequalities.
- Without fair governance, the costs of climate change (e.g. sea level rise) may be borne disproportionately by those least responsible and least able to adapt.

4. Moral / normative force

- From the perspective of natural justice or climate justice, it's not enough to look at physical metrics like how much sea level rise there is; one must also look at who suffers, who caused it, who benefits, and who has power to respond.
- Concepts like distributive justice, recognition justice, procedural justice (ensuring voices of vulnerable are heard) are often invoked in climate policy. For example, in *The Paris Agreement and Climate Justice* article, these justice dimensions are explicitly considered. ([AGU Publications](#))

Potential weaknesses / limits of relying exclusively on inequality / extractive/inclusive concepts

While I largely agree with your view, there are important caveats and reasons why socio-economic inequality is not a perfect proxy or determinant for sea level rise risk or exposure:

1. Geophysical factors still dominate physical exposure

- As you've already pointed out, land uplift/subsidence (glacial rebound, tectonic movement, sediment compaction) determine relative sea level rise more strongly in many places than wealth or institution type. Even very equal societies might be in areas where land is subsiding or where global sea level rise effects are magnified.
- For instance, Norway has been shown in some studies to have relatively modest *relative* sea level rise in many spots because of land uplift, even though it's rich, oil-dependent, etc. So equality or extractive/inclusive nature of institutions don't change the geophysical baseline.

2. Equality doesn't guarantee good adaptation

- Even countries with low inequality and relatively inclusive institutions can make maladaptive choices, suffer from poor planning, or have local variation in capacity.
- For example, coastal areas may still be neglected if they are rural or politically marginal even in otherwise "equal" countries.

3. Time lags, path dependence

- The effects of extractive/inclusive institutions tend to unfold over long periods. Infrastructure, regulation, land use, etc., have path dependence.
- Also, past damage (e.g., land subsidence from extraction) may continue, even if institutions become more inclusive; reversing subsidence (or mitigating its effects) is hard or impossible in many cases.

4. Heterogeneity within countries

- Within any given country, there might be strong inequalities among regions, communities, levels of wealth, political voice. So a country might have relatively low Gini overall but large internal disparities in who is exposed or vulnerable to sea level rise.
- Coastal zones are often special: land use, infrastructure, urbanization, development pressures, zoning, etc., vary widely.

My view: integrating both

I think the strongest approach is integrative:

- Use geophysical data (sea level rise projections, relative movements of land, topography, coastal subsidence, etc.) to map **physical risk/exposure**.
- Combine that with **institutional and socio-economic data** (inequality indices, measures of governance, political inclusion, infrastructure quality, planning regimes, adaptation capacity, poverty, etc.) to map **vulnerability / capacity to adapt** and **justice dimensions** (who bears costs, who benefits).
- Also, monitor policy processes: who has voice in coastal management, where protection is prioritized, how compensation is distributed, etc.

In that sense, Acemoglu & Robinson's extractive/inclusive institutional framework can help explain differences in how well societies are able to respond to sea level rise — and who is protected vs who is left exposed — rather than being a direct predictor of physical sea level change itself.

What this suggests for policy / action

- Ensuring that institutional reforms toward more inclusivity (political, economic, legal) are part of climate adaptation planning.
- Making sure vulnerable populations (low income, marginalized, coastal dwellers) have strong legal rights, compensation, infrastructure, and participation in planning.
- Recognizing that climate justice needs to address both the causes (emissions, land use, etc.) *and* the distribution of harm and adaptive capacity.
- Incorporating fairness criteria explicitly in coastal protection schemes, land zoning, flood risk management.

If you like, I could try to pull together case studies that show where more equal / more inclusive countries or regions have done better at minimizing sea level rise risks (or adapting) vs those with more extractive institutions, for a comparative empirical angle. Would that be interesting to you?

And what about China ? Is there a recent acceleration, more substantial than in other countries ?

There is evidence that China is experiencing accelerated and relatively high sea-level rise along many of its coasts, particularly when you factor in subsidence. But whether that acceleration since 2022 is “more substantial than in other countries” depends on what benchmarks you use (global averages, specific regions, etc.). Below is a summary

of what the data shows, what is known, where uncertainties lie, and how China compares.

What the data says about China and recent acceleration

1. Rates and trends

- A study *Absolute Sea Level Changes Along the Coast of China From Tide Gauges, GNSS, and Satellite Altimetry* (1993-2019) found that after correcting for land motion, absolute sea level (ASL) rise along the Chinese coast is about **3.94 ± 0.88 mm/yr** on average. This is somewhat higher than the global mean for similar periods. ([Système de Données Astrophysiques](#))
- Another study *Sea-level change in coastal areas of China: Status in 2021* reports a long-term annual rate of **3.4 ± 0.3 mm/yr** (for 1980-2021) and identifies an acceleration of **0.06 ± 0.02 mm/yr²**. ([ScienceDirect](#))
- Coastal sea levels in China have been reported to reach record highs in 2022: China's coastal sea level in 2022 was 94 mm above the 1993-2011 average, about 10 mm higher than in 2021. ([CNN](#))

2. Subsidence and local variability

- Ground subsidence (due to groundwater extraction, oil/gas/water withdrawal, load of built structures) plays a major role in many Chinese coastal areas, especially in deltas and plains. This makes *relative* sea level rise (sea level rise + land sinking) much larger in some places. ([PMC](#))
- In some urban/suburban coastal zones, subsidence has been severe, which increases local risk substantially. ([Reuters](#))

3. Acceleration

- The study that found 3.4 ± 0.3 mm/yr for 1980-2021 also estimated an *increase* in the rate of sea level rise (i.e. acceleration): $\sim 0.06 \pm 0.02$ mm/year² over that span. ([ScienceDirect](#))
- The CNN report (2023) says that sea level along China's coasts has been rising more quickly than the global average, and cites that in 2022, sea levels were significantly above baseline trends. ([CNN](#))

Comparisons / Is China's acceleration "more substantial" than elsewhere (since ~2022 or so)?

Here are the constraints and comparisons:

- The global average sea level rise is often estimated around **$\sim 3\text{-}4$ mm/yr** for recent decades (post-1990s). China's $\sim 3.4\text{-}3.9$ mm/yr in many coastal places is at or somewhat above that, so China is not unusually low. ([Xinhua](#))
- But "acceleration since 2022" is a very short time period to detect robust changes in slope. Many published studies use multi-decade data (10-40 years), because shorter windows are noisy (weather, seasonal effects, etc.). So the data since 2022 may show records (e.g. "highest sea level on record") more than a clear change in acceleration.
- Local rates (relative sea level rise) in China in areas heavily affected by subsidence are already *much higher* than the global mean: in some places,

relative rise is many mm/year more, but those are local hotspots. So while China is among the regions showing strong exposure, whether its acceleration *exceeds* many other comparable regions is less well established in peer-reviewed data as of now.

Uncertainties and what to watch out for

- **Short-term variability:** Storm surges, seasonal cycles, large climate anomalies (e.g., El Niño, regional ocean oscillations) can temporarily push up sea levels, so single years (like 2022) being record high may reflect these phenomena rather than a permanent surge in trend.
- **Correcting for vertical land motion:** It's crucial to distinguish absolute sea level rise (water height wrt fixed Earth frame) from *relative* sea level rise (which includes land rising/sinking). Because in many Chinese coastal zones, subsidence is a big component. If you don't properly correct it, rates might look bigger or more accelerating than the ocean part alone.
- **Data availability / gaps:** Some coastal gauges/satellite altimetry have limited historical data, or are affected by local human activity (land reclamation, coastal engineering) that can confound interpretations.
- **Attribution of acceleration:** Even in places where acceleration appears, attributing *what* is causing it (increased melting, thermal expansion, stronger ocean currents, changes in wind patterns, or increased subsidence) is often still research-active, so not all of the "extra rise" is clearly linked to, say, human activity.

My Assessment

- Yes — China has seen what seems to be **relatively high sea level rise** along its coast, and evidence of acceleration (over decades) that may be above some global benchmarks.
- However, whether that acceleration *since 2022* is "more substantial" than in many other countries is not as clearly established (in the peer-reviewed literature) yet. Some reports suggest record levels, but over short windows.
- China is definitely among the more vulnerable countries in terms of **exposure** (large population in coastal zones, many cities at or near sea level, widespread subsidence) which amplifies the risk from any sea level rise.

If you like, I can try to pull together a table of recent RSLR (relative sea level rise) rates for several countries in recent years (say 2018-2025) to compare China vs Norway vs UK vs a few others, to see how China stacks up in the latest period. Do you want that?

ANNEX 2

What about cameras and lasers to separate good from bad olives (https://www.francebleu.fr/infos/societe/cameras-et-laser-pour-trier-les-olives-1390935353) and vacuum harvesting ? (https://www.oliveoiltimes.com/world/robotic-olive-harvesters-might-horizon/57896)

You've asked about some of the newer / more advanced harvesting / sorting methods (cameras + lasers, vacuum / robotic harvesters) — these are very promising, but they come with trade-offs. I'll outline what the literature and industry say, the pros & cons, and in what situations they may be a good compromise.

What the Tools / Technologies Are

1. Camera + Laser Sorting

- Machines use high-resolution cameras and optional laser sensors to detect defects (bruises, decay, foreign materials, external damage) or sort olives by ripeness / color / external appearance. ([PubMed](#))
- Some sorting machines are capable of very fine discrimination: separating olives with minor external defects, foreign objects (stones, twigs), over-ripe or under-ripe ones. ([tomra.com](#))

2. Vacuum / Robotic Harvesting

- For example, prototypes by Abundant Robotics aimed at fruit picking (apples, potentially olives) using imaging, AI, and vacuum to pick fruit. The robot detects ripeness, selects fruit, vacuums it into collection. ([Olive Oil Times](#))
- Also, more generally, robotic harvesters are being developed, which might reduce labor, allow more continuous / extended harvesting beyond daylight hours, etc. ([Olive Oil Times](#))

Potential Advantages / Benefits

These technologies offer ways to combine some of the benefits of hand-picking with advantages of mechanization.

- **Selectivity and Quality Control:**

Camera + laser sorting can remove bad fruits before milling, which helps ensure better chemical and sensory quality (lower defects, fewer oxidized or spoiled fruits). Optical sorting can help improve extra-virgin olive oil attributes. ([PubMed](#))

- **Reduced Manual Labor Costs / Scalability:**

Robots or vacuum pickers could work fast, possibly continuously, reduce dependence on seasonal labor, and allow harvesting under a broader set of conditions. ([Olive Oil Times](#))

- **Speed / Time Efficiency:**

Faster harvesting plus earlier / more accurate removal of off-quality olives means less time for olives to degrade (oxidation, fermentation) before pressing. Sorting can reduce processing of “worse” olives. ([MDPI](#))

Risks / Drawbacks / Trade-offs

However, implementing these technologies doesn't automatically equal hand-picked quality. Some of the drawbacks:

- **Fruit Damage:**

Even with robotic or vacuum approaches, if the method uses suction,

mechanical contact, or movement that bruises or damages olives, that can still lead to increased free acidity, lowered phenolic content, etc. ([MDPI](#))

- **Speed & Time After Harvest Still Critical:**

Sorting or robotic picking helps, but if olives are stored poorly, delayed in pressing, or handled roughly after harvesting, quality deteriorates. Studies show that storage temperature, time from harvest to milling, etc., often make large differences. ([MDPI](#))

- **Cost, Complexity, Maintenance:**

High tech machines are expensive, require calibration, maintenance, power, training, etc. Also may not be accessible to small producers. Initial investment is high.

- **Accuracy Limitations:**

Even with cameras / lasers, some internal defects or flavours arising from late-stage internal oxidation etc. might not be visible externally. Also, sorting by external appearance doesn't catch everything (e.g. olives that look fine but are already internally degrading).

- **Variety, Tree Type, Terrain Limitations:**

Very old trees, irregular shapes, difficult terrain, small groves, etc., may be harder to adapt to robotic / vacuum methods. Also, optical systems may get fooled by lighting, occlusion (leaves, branches), or mixed ripeness in clusters.

What Studies Say

- There is clear evidence that mechanical harvesting (vibrating combs, shakers, etc.) tends to increase bruising compared to manual harvesting. ([ASHS](#))
- But also that if post-harvest handling is good (e.g. storage at ~5°C, minimal delay), some of the quality loss can be greatly reduced. ([MDPI](#))
- In some trials, olives harvested mechanically and sorted / processed well still yield high-quality oil. For example, in large trees in Apulia, mechanical systems + good handling gave high quality oil. (sjar.revistas.csic.es)
- Optical sorting (e.g. RGB sorting machines) has been shown to produce EVOO with better profiles when sorted olives are used; superior chemical / sensory profiles compared to unsorted. ([PubMed](#))

My Assessment: Are These Methods "Better"?

Yes — these methods show strong promise as a “best of both worlds” path: combining speed and scale with selectivity and quality. But whether they are *better* depends on your goals, resources, and constraints.

If I were producing olive oil and striving for a high-end extra virgin product, here is how I see the hierarchy:

- Ideal: hand-picking with very careful selection, minimal damage, immediate / quick processing.
- Next best: vacuum / robotic pickers + camera/laser sorting, combined with excellent post-harvest handling (cool, fast, clean).

- Afterwards: more conventional mechanical harvesting (shakers, etc.) if cost / labor constraints demand, but focusing heavily on reducing damage and speeding up to the mill.

So in many cases, robotics / camera-laser sorting + vacuum harvesting could approach or even rival hand-picking for many quality parameters, especially if the implementation is well managed.

If you like, I can pull up some case studies of producers who've gone from hand-picking to robotic / sorting, and what their oil quality changed by — that might give a clearer picture in practice.