Universitat Autònoma de Barcelona

Lògiques d'accés escolar i processos de segregació social. Implicacions en el terreny de les desigualtats educatives

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Doctorat en polítiques públiques i transformació social (IGOP-UAB)

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1. Introducció

1.1 Justificació de la tesi

Aquesta tesi és el resultat d'una part significativa de la meva trajectòria com a investigador. Des que vaig finalitzar els estudis en sociologia, he compaginat els estudis de doctorat amb la meva tasca com a investigador. Durant aquest període he tingut ocasió de participar en nombroses recerques en el camp de la sociologia de l'educació i l'anàlisi de les desigualtats educatives, bona part de les quals han girat al voltant de les dinàmiques de segregació escolar. En bona mesura, aquest objecte d'estudi ha esdevingut un eix central de la meva recerca.

Durant més de deu anys, de recerca en recerca, he anat traçant una mirada sociològica al voltant de les causes de la segregació escolar, dels seus efectes i de les polítiques públiques que la regulen. D'aquestes investigacions n'han sorgit un bon grapat de publicacions, algunes d'elles amb voluntat d'aportar noves evidències a la realitat catalana, d'altres amb voluntat de fer contribucions a la literatura acadèmica especialitzada. Aquesta trajectòria personal, el volum de recerca feta i publicada, així com la complementarietat entre bona part d'aquesta recerca, han provocat que em decantés per presentar la meva tesi doctoral en format de compendi de publicacions. No es tracta, doncs, d'una tesi feta *ad hoc*. Aquesta tesi és la conseqüència d'una trajectòria investigadora que, amb el pas dels anys, ha anat teixint un corpus de recerca al voltant d'un objecte d'estudi particular. No ha estat, per tant, una tesi planificada des del seu inici. Es tracta, més aviat, d'una conseqüència "natural" d'una singladura intel·lectual que, sense saber-ho (si més no, en els seus inicis), ha anat teixint aquesta tesi doctoral.

Aquí es compilen alguns dels treballs que constitueixen el nucli dur de la meva aproximació sociològica a la segregació escolar. No són tots els treballs publicats al respecte, però sí una selecció significativa de les principals dimensions abordades durant aquests anys. La major part d'aquesta recerca l'he realitzat en el marc del Grup de Recerca en Educació i Equitat (GREDEQ) de l'Institut de Govern i Polítiques Públiques (IGOP) de la UAB. En concret, els treballs que aquí compilo estan elaborats conjuntament amb els dos directors de la tesi: Miquel Àngel Alegre i Isaac Gonzàlez. Aquesta tesi no és, doncs, fruit exclusivament de la meva feina, sinó d'una agenda compartida de recerca i d'unes dinàmiques de treball grupals en les quals he tingut el privilegi de participar durant tots aquests anys. Qualsevol mèrit que pugui contenir aquesta tesi, és totalment compartit.

Concretament en aquesta tesi compilo sis publicacions; cinc articles acadèmics i un capítol de llibre. Quatre d'aquests articles estan publicats en revistes internacionals (dues britàniques i dues nord-americanes), l'article restant està publicat en una revista espanyola i el capítol forma part d'un llibre d'àmbit català. Aquestes són les referències de les sis publicacions.

A. Alegre, M.A. i Benito, R. (2012) "'The best school for my child?' Social geographies of school choice in Barcelona", a *British Journal of Sociology of Education*, 33 (6): 849-871.

B. Benito, R., Alegre, M.A., i Gonzàlez, I. (2014) "School educational project as a criterion of school choice: discourses and practices in the city of Barcelona", a *Journal of Education Policy*, 29 (3): 397-420.

C. Benito, R., Alegre, M.A., i Gonzàlez, I. (2014) "School segregation and its effects on educational equality and efficiency in 16 OECD comprehensive school Systems", a *Comparative Education Review*, 58 (1): 104-134.

D. Benito, R., i González, I. (2013). "¿Puede el efecto composición reducir las desigualdades educativas? Una mirada sobre los efectos de la segregación escolar en España y los países del modelo de integración uniforme", a *Revista de la Asociación de Sociología de la Educación,* 6 (1): 49-71.

E. Benito, R., i González, I. (2012) "L'efecte composició com a factor d'èxit escolar: projecció dels resultats educatius en una proposta analítica d'escenaris segregat i desegregat", a *L'estat de l'educació a Catalunya*. *Anuari 2011*. Barcelona, Fundació Jaume Bofill.

F. Alegre, M.A., Benito, R. i González, I. (2010) "Measures and Determinants of Student Body Socioeconomic Diversity: Evidence from Spain", a *Journal of School Choice*, 4 (1): 23-46.

En conjunt, s'ofereix aquí una triple mirada a la segregació escolar. Per una banda, es posa l'accent en una de les seves principals causes: les (desiguals) lògiques de tria familiars. Per altra banda, s'aborda un dels seus principals efectes: l'impacte sobre els resultats acadèmics. Així mateix, també s'analitza una de les polítiques que regulen l'accés escolar: la zonificació escolar. Per tant, causes, efectes i polítiques s'imbriquen en aquesta tesi, no amb la voluntat d'oferir una mirada holística a l'objecte d'estudi, sinó amb la intenció d'aproximar-se a la seva complexitat mitjançant un conjunt d'anàlisis específiques.

Certament, haguéssim pogut optar per focalitzar la tesi en alguna d'aquestes tres dimensions. Segurament, aquesta hauria estat l'opció seleccionada en cas d'iniciar una tesi des de zero. En aquest cas, però, la trajectòria de recerca que hem anat seguint, ens oferia la possibilitat d'articular una aproximació a la segregació escolar més polièdrica, alhora que coherent i cohesionada. No en va, la mirada epistemològica i teòrica amb que travessem aquestes tres dimensions és la mateixa.

L'objectiu central d'aquesta tesi és abordar el fenomen de la segregació escolar, des d'una perspectiva sociològica, tot posant l'accent en les seves implicacions en el terreny de les desigualtats educatives. En aquesta direcció, causes, efectes i polítiques són dimensions estrictament interrelacionades, atès que totes tres són imprescindibles per entendre les desigualtats en l'accés escolar. Les causes i els efectes de la segregació escolar no deixen de ser dues cares de la mateixa moneda, dues dimensions que es retroalimenten permanentment, i que, al seu torn, estan fortament condicionades per les polítiques públiques

d'accés escolar. Sense anar més lluny, les pròpies polítiques d'accés escolar poden esdevenir una de les causes de la segregació escolar i, de retruc, amplificar-ne o minimitzar-ne les conseqüències. Malgrat aquesta permeabilitat, cada publicació situa una de les dimensions com a objecte principal. Així, les publicacions A i B posen l'accent en les causes, les publicacions C, D i E en els efectes, i la publicació F en les polítiques d'accés escolar.

Aquesta introducció no té per objectiu elaborar un marc teòric sobre aquestes tres potes, ni tampoc entrar a detallar les diferents aproximacions metodològiques que aquí es combinen. El propòsit de la introducció simplement és justificar per què s'ha optat pel format de compendi de publicacions, exposar quina és la coherència del compendi, i contextualitzar el nostre objecte d'estudi. Tant l'emmarcament teòric com la descripció de la metodologia estan integrades dins de les pròpies publicacions. És per això que no redundarem en aquests aspectes. Passem ara a contextualitzar l'objecte d'estudi, tant la segregació escolar en general com les tres dimensions especifiques que analitzarem, tot detallant quina és la nostra mirada epistemològica al respecte.

1.2 Sobre l'objecte d'estudi

Fins a mitjans del segle XX, la segregació escolar va ser intrínseca a bona part dels sistemes educatius occidentals. La separació de l'alumnat en funció del seu origen social i l'estructuració d'una oferta formativa diferenciada per a cada classe social varen ser elements pràcticament inqüestionables fins a la configuració de l'escola de masses moderna. Mitjançant la implementació d'un tronc comú per al conjunt de l'alumnat, els sistemes educatius de postguerra varen pretendre -si més no, sobre el paper- articular un model d'ensenyament únic, edificat sobre el principi d'igualtat d'oportunitats, en què confluïssin els diferents grups socials.

Al llarg de les darreres dècades, la sociologia de l'educació ha posat en dubte l'assoliment d'aquests objectius. Per una banda, durant els anys setanta, les teories de la reproducció social, qüestionant el paradigma funcionalista de la igualtat d'oportunitats educatives, varen posar al descobert alguns dels mecanismes mitjançant els quals la institució escolar reprodueix –i legitima- les desigualtats socials. Per altra banda, múltiples recerques han posat de manifest les importants dinàmiques de segregació escolar que, a dia d'avui, encara perduren –amb intensitats diferents- en una part substancial dels sistemes educatius occidentals.

Des dels estudis pioners realitzats als anys cinquanta als EUA, els efectes de la segregació escolar sobre els resultats educatius han estat analitzats per diferents disciplines, entre elles la sociologia. D'aleshores ençà, un nombre important d'investigacions han destacat la incidència significativa de la composició social dels centres d'ensenyament sobre els resultats individuals

dels alumnes; l'anomenat *efecte composició*. En la mesura que les oportunitats acadèmiques d'un alumne, al marge d'estar condicionades per les seves característiques individuals i familiars, també poden veure's condicionades –de forma significativa- per les característiques dels alumnes amb qui comparteix escola, la segregació escolar esdevé un important factor de desigualtat educativa.

A més, una part significativa d'aquestes investigacions han coincidit a destacar que la composició social exerceix una influència superior que les característiques pedagògiques i organitzatives de les escoles sobre els resultats dels alumnes. Lògicament, aquestes conclusions no han deixat indiferents als pedagogs i, durant les darreres dècades, s'ha produït un intens debat al voltant de la capacitat dels docents i de les escoles per influir sobre els assoliments educatius dels seus alumnes. Mentre el corrent d'estudis d'efectivitat escolar ha tendit a emfatitzar les potencialitats de l'actuació pedagògica, bona part de les recerques sobre l'efecte composició han tendit a relativitzar el seu marge d'actuació. En aquest debat trobem en joc, doncs, una qüestió decisiva des del punt de vista de la intervenció educativa; destriar quin és el marge de maniobra de que disposen les escoles per reduir les desigualtats educatives. Alhora, però, també està en joc destriar quin és el marge d'actuació de que disposa la planificació educativa –tot afavorint una distribució més equilibrada de l'alumnat- en aquest terreny.

Els efectes de la segregació escolar sobre els resultats escolars esdevenen, doncs, un objecte d'estudi cabdal tant per la seva incidència (negativa) sobre la igualtat d'oportunitats com per les seves implicacions en l'àmbit de les polítiques educatives. En la mesura que aquests efectes siguin de caràcter asimètric –és a dir, que els alumnes amb una situació de partida més desfavorida es mostrin més sensibles a la composició social dels centres- les polítiques orientades a la reducció de la segregació escolar poden generar importants efectes positius en el la reducció de les desigualtats educatives. Però malgrat la seva rellevància des del punt de vista analític i les seves potencialitats des del punt de vista de la intervenció educativa, com ha apuntat Vincent Dupriez, "la segregació escolar i la seva influència sobre l'aprenentatge i les trajectòries escolars de l'alumnat (encara) no forma part dels grans clàssics de la recerca en educació" (Dupriez, 2009: 5).

A casa nostra, el desenvolupament tardà de l'escola democràtica de masses ha provocat que la recerca al voltant de la segregació escolar hagi emergit (tímidament) de forma més recent. En els darrers anys, però, l'arribada de contingents migratoris procedents de països empobrits ha fet més visibles algunes de les dinàmiques de segregació escolar de la xarxa educativa, situant-se així com a objecte de preocupació social. Aquesta creixent problematització social de determinades lògiques de distribució de l'alumnat, però, no sembla haver situat la segregació escolar com a objecte d'atenció prioritari en l'agenda política (com va quedat palès en l'aprovació de la Llei d'Educació de Catalunya). No obstant, sí sembla haver-se situat com a objecte d'atenció d'alguns agents de la comunitat educativa (principalment algunes

associacions de pares i mares) i com a objecte d'atenció de l'àmbit acadèmic. Tot i així, possiblement com a conseqüència de l'escassetat de dades disponibles, encara trobem poca recerca realitzada al voltant d'aquestes qüestions per al cas català (i espanyol).

Ens trobem davant d'un concepte que ha estat relativament poc desenvolupat a nivell teòric. El que uneix a la pràctica totalitat d'investigacions realitzades en aquest àmbit és que han analitzat algun tipus de desequilibri en la distribució de l'alumnat, però, al mateix temps, trobem una gran diversitat d'operacionalitzacions del concepte. Així, sota el paraigües de l'anàlisi de la segregació escolar sovint es barregen fenòmens d'ordre divers. En aquesta pluralitat d'aproximacions analítiques trobem subjacents diferents consideracions en relació a quins són els desequilibris en la distribució de l'alumnat que podem considerar problemàtics.

Alguns autors han defensat la idea que la segregació escolar pot ser considerada problemàtica per si mateixa, més enllà de quin sigui el seu impacte sobre els resultats educatius. Apareixen aquí argumentacions justificades en base a la incompatibilitat de les dinàmiques de segregació escolar amb un dels objectius bàsics de la institució escolar; la preparació dels individus per a la vida pública i ciutadana en el context d'una societat pluralista (Dupriez, 2009). Des d'aquesta perspectiva, l'escola és l'espai per excel·lència en què els infants poden aprendre a cohabitar amb realitats socials i culturals diferents a la pròpia; un espai privilegiat, en definitiva, per a la interacció entre els diferents grups socials. Ens situem, doncs, en un terreny més polític que científic, malgrat que aquesta qüestió també pot ser abordada des de la filosofia política.

En una direcció similar, però per al cas específic de la "segregació ètnica" –bé referent als alumnes pertanyents a grups "ètnics", bé referent als alumnes nascuts a l'estranger-, alguns autors han assenyalat els potencials efectes negatius de les dinàmiques de segregació escolar per a l'establiment de relacions interculturals. Aquesta tesi es fonamenta, a nivell teòric, en l'anomenada *hipòtesi del contacte*, que sosté que el contacte intercultural contribueix a la superació de prejudicis i actituds racistes, alhora que facilita l'acceleració de determinats processos d'aprenentatge informal entre els alumnes pertanyents a grups minoritaris. En base a aquest posicionament, les fronteres físiques i socials existents entre grups "ètnicament diferenciats" promouen la ignorància mútua, alimentant així creences errònies, reduccionistes i negatives de base irracional que engendren sentiments d'hostilitat entre grups, promovent al seu torn pràctiques i discursos discriminatoris envers els col·lectius minoritzats. Les imatges estereotipades entre grups, origen del racisme i la xenofòbia, tendeixen a ser corregides quan aquests estableixen processos d'acostament i coneixement mutu (Allport, 1954).

Diferents recerques han explorat les potencialitats de l'àmbit educatiu en la generació de contactes entre els grups majoritaris i els col·lectius minoritzats (Schofield, 1995; Wood i Sontleitner, 1996; Schnneider, Fonzi, Tani i Tomada, 1997; Smith i Schneider, 2000; Nesdale i Todd, 2000). Les seves conclusions reforcen la idea que el contacte intercultural, en igualtat d'estatus i en un context de caràcter no competitiu, contribueix a erosionar la base dels estereotips i a moderar la força dels prejudicis interètnics. I no tan sols dels prejudicis

estrictament interètnics; en general de tots aquells que es comparteixen respecte dels col·lectius minoritaris adscrits a "cultures diferents", com pot ser el cas d'algunes minories immigrades (Alegre, 2004).

Com apuntàvem anteriorment, en un altre ordre de coses, alguns autors també han considerat problemàtica la segregació escolar pels seus efectes sobre els resultats i/o les expectatives acadèmiques dels alumnes. Així doncs, des d'una perspectiva sociològica, podem considerar la segregació escolar problemàtica, principalment, per dos motius; per una banda, pels seus efectes negatius en el terreny de la "cohesió social" i, per l'altra, pels seus efectes negatius en el terreny de la igualtat d'oportunitats educatives (com a conseqüència del seu impacte sobre els resultats educatius). En aquesta tesi ens centrarem en aquest segon aspecte, atesa la seva relació directa amb l'anàlisi de les desigualtats educatives.

Sovint, des de l'àmbit acadèmic s'ha tendit a posar l'accent en aquelles dinàmiques de segregació que han estat objecte d'una major problematització social, malgrat que, en alguns casos, aquestes no siguin les situacions més problemàtiques des del punt de vista del seu impacte sobre els resultats. En canvi, algunes dinàmiques de segregació escolar socialment menys visibles, però que s'han mostrat més influents en el terreny de les desigualats educatives, possiblement no sempre han rebut l'atenció que mereixerien des del camp de la recerca sociològica.

A casa nostra, els debats socials i polítics –i també, en bona mesura, els debats acadèmics- al voltant de la segregació escolar sovint han tendit a focalitzar-se en la (sobre)concentració d'alumnes immigrats en algunes escoles, principalment alumnes nascuts en països empobrits o fills de famílies originàries de països empobrits. Aquestes realitats escolars més visibles i "extremes" habitualment han estat problematitzades pel seu (suposat) impacte negatiu sobre els resultats de l'alumnat i/o pels seus efectes negatius en el terreny de la cohesió social, entre d'altres motius. Però la concentració d'alumnes d'origen estranger en algunes escoles és només la punta de l'iceberg d'una segregació escolar estructural més àmplia i complexa; aquella que fa referència a la distribució del conjunt de l'alumnat segons el seu estatus socioeconòmic o el capital instructiu familiar. Una segregació que, sovint, tendeix a passar desapercebuda –o, si més no, no és considerada com a problemàtica-, malgrat que les seves conseqüències puguin ser més negatives des de diferents punts de vista.

A l'hora d'analitzar les dinàmiques de segregació escolar, doncs, cal distingir bé entre aquelles distribucions de l'alumnat que són problematitzades socialment i aquelles que podem considerar com a problemàtiques des d'un punt de vista sociològic. Aquesta distinció clàssica entre problema social i problema sociològic (Berger, 1963) és especialment pertinent per a l'objecte d'estudi que aquí ens ocupa, atès que, en alguns casos, la potent problematització social de la presència significativa d'alumnes immigrats en alguns centres ha deixat en segon pla l'anàlisi de dinàmiques segregadores més transcendents per als assoliments educatius del conjunt de l'alumnat.

Cal destacar que, en el cas català (i espanyol), aquesta situació s'ha vist accentuada per la manca de dades oficials referents a l'estatus socioeconòmic o al capital instructiu de les famílies escolaritzades a la xarxa escolar catalana. El fet que les úniques dades disponibles en relació a la composició social dels centres sigui el percentatge d'alumnes de nacionalitat estrangera o d'alumnes amb Necessitats Educatives Específiques (NEE), ha contribuït, sens dubte, a focalitzar les anàlisis sobre la concentració d'aquests col·lectius minoritaris en algunes escoles.

1.3 Segregació escolar vs concentració escolar

És necessari fer una primera distinció entre les dinàmiques de segregació escolar i les dinàmiques de concentració escolar. Les primeres fan referència a la distribució de l'alumnat en el conjunt de la xarxa escolar, mentre que les segones exclusivament fan referència a aquells centres educatius (minoritaris) que escolaritzen una proporció significativament superior d'alumnes pertanyents a un subgrup minoritari en comparació a la majoria de centres. Com hem apuntat en un altre lloc (Benito i Gonzàlez, 2007), una xarxa escolar segregada seria aquella que s'aproximaria a una situació d'*homogeneïtat social intraescolar* i d'*heterogeneïtat social interescolar,* és a dir, a una situació en què el perfil d'alumnes dins dels centres tendiria a ser homogeni i, en canvi, el perfil d'alumnes entre els diferents centres tendiria a l'heterogeneïtat. Així, a major nivell d'homogeneïtat social dins dels centres, major nivell de segregació social, i, alhora, a major nivell d'heterogeneïtat social dins dels centres, menor nivell de segregació escolar. En canvi, les situacions de concentració escolar només fan referència a la composició d'aquells centres amb situacions més extremes, independentment de quina sigui la distribució de l'alumnat en el conjunt de la xarxa escolar.

En base a aquesta distinció, podríem trobar xarxes escolars força segregades però que, al mateix temps, no presentessin realitats escolars guetitzades o amb una concentració significativa de grups minoritaris d'alumnes. En aquests casos, el nivell de problematització social probablement tendirà a ser baix, malgrat que les seves conseqüències sobre els resultats del conjunt de l'alumnat puguin ser més negatives. Per altra banda, també podríem trobar concentracions accentuades d'un grup d'alumnes en una escola o unes poques escoles que, alhora, formessin part d'una xarxa escolar amb un nivell de segregació més aviat baix. En aquests casos, el grau de problematització social probablement serà superior, malgrat que les conseqüències sobre els resultats del conjunt de l'alumnat, en comparació al cas anterior, puguin tenir un abast força inferior. Aquestes dues situacions hipotètiques permeten il·lustrar la necessitat de diferenciar, a nivell analític, les dinàmiques de segregació i concentració escolar, alhora que també posen de manifest la necessitat de contrastar ambdues dinàmiques per tal d'analitzar amb precisió la distribució de l'alumnat i poder-ne avaluar les seves conseqüències.

Al mateix temps, en relació a les dinàmiques de concentració escolar també és necessari analitzar tant aquelles (sobre)concentracions d'alumnes amb una situació social de partida "desafavorida" com les concentracions d'alumnes amb una situació de partida avantatjada. Sovint, les anàlisis tendeixen a focalitzar-se en les realitats escolars socialment menys afavorides, atès que els seus efectes sobre les dinàmiques educatives dels centres són més visibles. Ara bé, si ampliem el focus d'atenció i avaluem les conseqüències de la distribució de l'alumnat sobre el conjunt de la xarxa escolar, tan problemàtiques poden esdevenir aquestes realitats escolars com aquelles situacions, també minoritàries, de (sobre)concentració d'alumnes procedents d'entorns socials altament capitalitzats.

Des del punt de vista de les seves conseqüències globals -és a dir, dels seus efectes sobre els resultats del conjunt de l'alumnat- tan "problemàtica" és una escola que concentri un 70% de famílies sense estudis com una escola, de la mateixa xarxa escolar, que concentri un 70% de famílies universitàries. Els efectes negatius d'aquesta darrera realitat escolar, lògicament, no els trobem en les dinàmiques educatives del propi centre. El seus efectes sobre el conjunt d'alumnes de la xarxa escolar tenen lloc de forma indirecta, en la mesura que la concentració d'aquests capitals instructius provoca que altres centres tinguin una composició social més descapitalitzada i, en conseqüència, una situació educativa de partida menys "favorable". Aquests efectes (negatius) indirectes de les situacions de concentració de capitals tan sols poden ser abordats si l'anàlisi de les dinàmiques de concentració escolar s'acompanya de l'anàlisi de la segregació estructural del conjunt d'escoles. A més, per altra banda, també ens podríem trobar amb una xarxa escolar sense concentracions significatives d'alumnes amb capitals instructius familiars baixos, però que, alhora, sí presentés concentracions significatives d'alumnes amb capitals instructius elevats.

1.4 Segregació social vs "segregació ètnica"

Apuntàvem anteriorment que la concentració d'alumnes immigrats tendeix a situar-se com un problema de primer ordre en els debats tant socials com polítics al voltant de la segregació escolar. Ara bé, per tal d'avaluar de forma global els efectes de la distribució de l'alumnat, tan important és tenir en compte aquest col·lectiu -que representa un percentatge baix del conjunt de l'alumnat- com els alumnes autòctons en funció del seu capital instructiu familiar o algunes variables referents al seu estatus socioeconòmic, atès que és aquesta segona anàlisi la que permet conèixer les característiques estructurals del conjunt de la xarxa escolar. L'anàlisi de la distribució de l'alumnat immigrat, en canvi, només ofereix una visió parcial, focalitzada en una variable estructural que no és l'únic factor, ni el principal, de desigualtat educativa.

De fet, són nombroses les recerques que han posat de manifest que els factors referents a l'origen social de l'alumnat amb una major incidència sobre els resultats són el seu estatus socioeconòmic i el nivell d'estudis dels seus pares. A més, pel que fa a l'impacte de la

composició social sobre els resultats, algunes recerques han posat de manifest que la composició de l'alumnat segons aquestes dues variables té una major influència sobre els resultats individuals que no pas la "composició ètnica" (Van Ewijk i Sleegers, 2010b). Per tant, des d'aquest punt de vista, la concentració d'alumnes amb capitals instructius elevats podria considerar-se tant o més problemàtica que la concentració de determinats col·lectius immigrats en algunes escoles. Per altra banda, no cal dir que, al seu torn, les situacions accentuades de concentració de capitals instructius elevats també poden tenir importants efectes negatius en el terreny de la cohesió social.

Cal tenir present, també, que si analitzem la distribució de l'alumnat en el moment d'accedir a l'educació universal -és a dir, als tres anys d'edat- els efectes negatius de la seva concentració en algunes escoles s'han de situar més en el terreny de la cohesió social (en base a la *hipòtesi del contacte* esmentada anteriorment) que no pas en el terreny dels resultats acadèmics, atès que, com deia, aquests estan directament relacionats amb la posició que ocupen en l'estructura social i no tant amb la seva condició d'immigrats (o de fills d'immigrats). Ras i curt: la concentració d'aquests alumnes pot tenir efectes negatius pel fet que una part important de les famílies immigrades tinguin, alhora, un capital instructiu baix, però no pròpiament pel fet que siguin famílies immigrades. Diferent és la situació per a aquells alumnes que s'incorporen tardanament al sistema educatiu català i que, per tant, requereixen d'una atenció escolar específica -principalment derivada del seu desconeixement de la llengua vehicular del sistema educatiu-. En aquest cas, la concentració significativa d'aquest perfil d'alumnes en algunes escoles sí pot esdevenir problemàtica des del punt de vista instrumental.

Per altra banda, la concentració en algunes escoles d'alumnes d'origen estranger -bé nascuts a l'estranger, bé fills de pares nascuts a l'estranger- pot tenir efectes negatius sobre les pròpies dinàmiques de segregació escolar, en la mesura que generi un "efecte-fugida" de famílies autòctones cap a altres escoles. Ara bé, aquest efecte potencial no justifica que les concentracions d'alumnes immigrats se situïn com a objecte d'atenció prioritari de les anàlisis al voltant de la segregació escolar, atès que aquestes lògiques de fugida també tenen lloc, malgrat ser menys explícites, en relació a escoles infracapitalitzades amb poca presència d'alumnes immigrats. Com han evidenciat diferents recerques, en els processos d'elecció de centre entren en joc unes lògiques d'agrupament/distanciament entre grups socials que estan associades a diferents característiques –entre elles la procedència, però no exclusivament- de l'alumnat i les seves famílies (Gewirtz, Ball i Bowe, 1995; Van Zanten, 2007; Alegre *et al*, en premsa).

En definitiva, sense deixar de banda la procedència de l'alumnat, l'anàlisi de les dinàmiques de segregació escolar –especialment en l'educació infantil- entenem que ha de pivotar sobre variables referents a les característiques socioeconòmiques i al capital instructiu de les famílies, atès que aquestes són les variables amb un major impacte en el terreny de les desigualtats educatives i, a més, permeten disposar d'una panoràmica de les dinàmiques de segregació escolar que va més enllà de la distribució d'un grup minoritari d'alumnes. En

aquesta direcció, convé diferenciar en tot moment l'"heterogeneïtat social" de les escoles del seu nivell de "diversitat cultural", etiqueta habitualment emprada en relació a la procedència de l'alumnat. Sovint, les escoles amb major presència d'alumnes immigrats són percebudes com els centres de la xarxa escolar amb una composició social més heterogènia. En la majoria de casos, però, aquestes escoles, en relació a l'estatus socioeconòmic o el capital instructiu familiar dels alumnes, són extraordinàriament homogènies. Per tot plegat, en les publicacions que aquí es compilen es centrarà l'atenció en les dinàmiques de segregació social.

1.5 Causes de la segregació escolar

L'anàlisi de les causes de la segregació escolar és, certament, complexa, atès que són múltiples –i d'ordre divers- els factors que intervenen en els processos d'accés escolar. Podem identificar, però, alguns elements amb un pes especialment rellevant en la configuració de la distribució de l'alumnat entre les escoles i, per tant, en la generació de dinàmiques de segregació escolar.

En primer lloc, podem situar com un important factor de segregació escolar l'establiment d'itineraris formatius *(tracking)* de forma precoç. Lògicament, aquells sistemes educatius amb diferents vies formatives institucionalitzades a una edat inferior, presenten uns majors nivells de segregació acadèmica que aquells sistemes educatius de caràcter comprensiu que perllonguen el tronc comú fins a edats més avançades. Diferents recerques, a més, han posat de manifest que els sistemes de selecció precoç també presenten uns nivells de segregació social -en l'educació secundària obligatòria- força superior als dels models comprensius. Per tant, malgrat aquest no sigui un factor de segregació escolar a tenir en compte en l'anàlisi de la realitat catalana (atès el caràcter comprensiu del nostre sistema educatiu), sí és un factor d'especial transcendència a l'hora de comprar els nivells de segregació escolar entre diferents sistemes educatius.

En segon lloc, un altre factor de segregació escolar vinculat a les característiques dels sistemes educatius és la presència del sector privat en la provisió de serveis. Algunes recerques han posat de manifest que aquells sistemes educatius amb una major presència d'escoles estrictament privades o de titularitat privada sostingudes amb fons públics tendeixen a presentar uns nivells de segregació escolar més elevats. Aquesta incidència negativa sobre la distribució (social) de l'alumnat és conseqüència, entre d'altres factors, de les barreres econòmiques amb les que es troben determinats sectors de població per accedir a aquest tipus d'escoles.
A casa nostra, aquest és un factor de segregació especialment transcendent, atès que, malgrat per llei l'ensenyament obligatori és gratuït al conjunt de centres sostinguts amb fons públics, algunes escoles concertades reben contribucions econòmiques de les famílies per diferents

conceptes; quotes regulars i periòdiques a través de fundacions privades, activitats complementàries "voluntàries", activitats escolars dins de l'horari lectiu, matrícula o derrama a principi o final de curs, etc. (Carbonell, F. i Quintana, 2003). Segons una estimació realitzada per Calero i Bonal (1999) a partir de la *Encuesta de financiación y gastos de la enseñanza privada* de 1998, el curs 1994-95, al voltant del 30% dels ingressos de l'escola privada concertada procedien de les quotes familiars. Al marge d'aquestes barreres econòmiques, en alguns centres concertats també tenen lloc pràctiques de "selecció adversa" (*cream skimming*) amb l'objectiu de dissuadir la demanda de famílies amb una determinada condició social i cultural. Algunes d'aquestes pràctiques són la realització d'una entrevista personal d'accés on es desaconsella la incorporació al centre, la manca d'informació pública sobre les característiques del centre, la manifestació per escrit de la conformitat per rebre formació religiosa cristiana, etc. (Carbonell, F. i Quintana, 2003).

En tercer lloc, podem identificar com un factor de segregació escolar rellevant la pròpia segregació residencial dels municipis. Certament, la manera com els diferents sectors de població es distribueixen en l'espai urbà no determina la distribució de l'alumnat entre les escoles, però sí que tendeix a condicionar-la. Així, en aquells municipis amb uns nivells de segregació residencial més elevats (habitualment ciutats mitjanes o grans) els nivells de segregació escolar també tendeixen a ser més elevats, atès que les escoles públiques, que habitualment es troben més ancorades al seu entorn social més proper, tendeixen a reproduir les composicions socials homogènies dels barris. En canvi, els municipis amb uns nivells de segregació residencial més baixos presenten unes condicions estructurals més favorables per a l'heterogeneïtat social intraescolar (Benito i Gonzàlez, 2007).

Per últim, un factor transcendental de segregació escolar són les diferents lògiques de tria familiar que entren en joc durant els processos d'accés escolar, fortament condicionades pel capital econòmic i instructiu. Simplificant, les famílies de menor estatus tendeixen a prioritzar la proximitat del centre al domicili i la gratuïtat del servei educatiu, mentre que les famílies d'estatus mitjà i elevat, en termes generals, tendeixen a valorar un major nombre de factors, entre els quals destaca la cerca d'una composició social "favorable" (Rambla, 2003; Benito i Gonzàlez, 2007; Alegre *et al*, 2010). Al marge de les diferències en les motivacions o els factors que tendeixen a valorar les famílies, també trobem diferències significatives en relació a la seva capacitat estratègica. Com ha assenyalat Stephen Ball (2002) la tria escolar està fortament condicionada pel capital econòmic, cultural, social i emocional de les famílies, situant-se així les classes mitjanes en una posició d'avantatge competitiu, atès que gaudeixen d'una major capacitat interpretativa del marc normatiu, tenen major accés a informació relativa a la situació posicional de les diferents escoles, disposen de majors recursos econòmics, etc. És en base a aquest diferencial en les oportunitats de tria segons l'origen social que alguns autors han situat l'elecció de centre com un important factor de desigualtat educativa i una nova forma de reproducció social (Van Zanten, 2001).

Hi ha un darrer element que té un pes transcendental en la generació de les dinàmiques de segregació escolar; la regulació dels processos d'accés escolar. Malgrat que per si mateix no es pot considerar un factor causal de la segregació escolar, les diferents fórmules amb què les administracions educatives regulen aquests processos tenen una influència significativa sobre els marges d'elecció de que disposen les famílies i, en conseqüència, sobre la distribució de l'alumnat. En hi referirem més endavant.

1.6 El pes de l'*efecte composició*

Com apuntàvem anteriorment, durant les darreres dècades, des de diferents disciplines s'ha assenyalat que, més enllà del pes de les característiques individuals, les característiques agregades dels alumnes també tenen un efecte addicional sobre el rendiment acadèmic. Així, el fet que un alumne sigui escolaritzat en una centre socialment afavorit o en un centre amb una composició social més desfavorida pot tenir conseqüències significatives per als seus resultats escolars. Des d'aquesta perspectiva, entre el conjunt de característiques dels centres que exerceixen una influència significativa sobre els resultats –és a dir, l'anomenat *efecte escola*-, caldria tenir en consideració, més enllà de les característiques pedagògiques i organitzatives de les escoles (*efecte procés*), les característiques del conjunt d'alumnes que s'hi escolaritzen (*efecte composició*).

Alguns autors han relativitzat aquest factor atenent al pes explicatiu de les variables individuals sobre el resultats. En aquesta direcció, Gorard (2006) ha qualificat, en un to provocatiu, de "patològic" qualsevol intent de cercar efectes sobre les desigualtats educatives més enllà de les característiques familiars de l'alumnat. Cal tenir present, però, que aquests factors exògens a la institució escolar no tenen el mateix pes en tots els sistemes educatius, deixant-se entreveure així l'existència d'un cert marge d'influència sobre els resultats educatius de les dues dimensions de l'efecte escola; l'efecte procés i l'efecte composició (al marge d'altres factors de política educativa). A més, independentment de quin sigui el marge d'actuació disponible, aquestes dues dimensions són les principals vies de que disposen les polítiques educatives per incidir –bé al nivell *micro* de l'escola, bé al nivell *macro* de la planificació educativa- sobre les desigualtats educatives.

Malgrat que a final dels anys cinquanta alguns estudis realitzats als EUA ja havien començat a explorar els efectes de les característiques agregades dels alumnes, principalment sobre les seves aspiracions d'accedir a la Universitat, la publicació de l'informe Coleman va representar un important punt d'inflexió per a la recerca en educació (1966). Per una banda, les seves conclusions, en assenyalar com a principals determinants dels resultats acadèmics alguns factors exògens al sistema educatiu, minimitzaven la capacitat d'incidència del treball pedagògic dels centres. Per altra banda, en la mesura que les característiques dels alumnes d'una escola tenien una major incidència en les seves trajectòries acadèmiques que altres

variables escolars, es posaven de manifest els potencials efectes negatius de les dinàmiques de segregació escolar sobre els resultats educatius. S'obria així la porta a una línia de recerca que considerava la segregació problemàtica per ser font de desigualtats en els aprenentatges i, en conseqüència, per no afavorir la igualtat d'oportunitats educatives (Dupriez, 2009).

Des de la publicació de l'informe Coleman, els efectes de la composició escolar han estat analitzats per diferents disciplines, principalment l'economia, les ciències de l'educació i la sociologia. Un bon nombre de recerques han aportat evidències empíriques força contundents en relació al pes de la composició escolar, malgrat que també trobem algunes recerques (minoritàries) que han posat en qüestió l'existència d'aital efecte (Teddlie, Stringfield i Reynolds, 2000; Marks, McMillan i Hillman, 2001). En termes generals, però, la majoria d'investigacions realitzades durant les darreres dècades han destacat la rellevància d'aquest factor escolar, malgrat que no existeix unanimitat pel que fa a les seves dimensions ni als seus factors explicatius (Nash, 2003; Thrupp, Lauder i Robinson, 2002).

Un bon grapat de recerques han aportat evidències empíriques que constaten la incidència significativa de la "composició social" -mesurada aquesta mitjançant variables referents a l'origen social de l'alumnat, com ara l'estatus socioeconòmic i cultural (majoritàriament), el nivell d'estudis dels pares o la classe social- sobre els resultats dels centres i dels alumnes (Bryk i Raudenbush, 1992; Caldas i Bankston, 1997; Lauder *et al*, 2007; Alegre i Arnett, 2007). De fet, algunes recerques han destacat que la composició social dels centres presenta una major capacitat explicativa dels resultats dels alumnes que les seves característiques individuals (Dumay i Dupriez, 2008). Com comentàvem, però, no existeix un consens clar al voltant de la magnitud d'aquest efecte.

Als anys setanta, algunes recerques varen posar en qüestió la fonamentació metodològica dels resultats de l'informe Coleman, rebutjant així la idea que la composició social dels centres exercís una incidència significativa sobre els resultats acadèmics de l'alumnat (Thrupp, 1995). Seguint aquesta estela, a la dècada dels vuitanta va adquirir un paper destacat la *School Effectiveness Research* (SER), un moviment d'investigació que pretenia situar com a objecte d'estudi prioritari l'impacte dels processos interns de les escoles sobre els resultats escolars. Davant de les recerques que, arrel de la publicació de l'informe Coleman, tendien a situar el pes de l'efecte de la composició escolar per sobre del treball pedagògic i organitzatiu dels centres, des de la SER es defensava la idea que les escoles podien marcar la diferència -*schools can make a difference*- i, per tant, ser efectives també a l'hora de reduir les distàncies entre els resultats dels alumnes. Aquesta efectivitat podia assolir-se, segons afirmaven, en base a actuacions com ara la creació d'un clima de consens, cohesió i cooperació entre el professorat, la generació d'una "atmosfera ordenada" dins de l'escola o l'orientació de la pràctica docent cap a l'èxit acadèmic (Scheerens i Bosker, 1997).

A partir de finals dels noranta, els resultats obtinguts per les investigacions d'efectivitat escolar varen ser objecte de crítica, principalment, per no haver parat suficient atenció a la composició social dels centres (Slee, Weiner i Tomlinson, 1998; Thrupp, 1999; Scheerens *et al*, 2001; De Fraine *et al*, 2003). Aquestes crítiques afirmaven que en els estudis d'efectivitat s'establia una relació de causalitat entre algunes variables de procés escolar i els resultats acadèmics que no havia estat suficientment contrastada. D'aquesta forma es qüestionava que l'efecte escola detectat en els estudis d'efectivitat escolar estigués associat al nivell d'eficàcia dels centres, atès que les pràctiques educatives que incrementaven els nivells d'efectivitat estaven directament relacionades amb la seva composició escolar.

En definitiva, durant les darreres dècades (especialment durant els anys vuitanta i noranta), els investigadors de la tradició dels estudis d'efectivitat escolar i els investigadors crítics amb aquests estudis han mantingut un intens debat al voltant de la capacitat de les escoles per influir en els resultats dels seus alumnes. Al vell mig d'aquest debat hi trobem el pes de la composició escolar. Davant de les crítiques rebudes, alguns autors emmarcats en la corrent de l'efectivitat escolar han argumentat que, tradicionalment, aquestes recerques sí han tingut en consideració l'impacte de la classe social sobre els resultats acadèmics, tant a nivell individual com a nivell agregat.

La diferència amb altres investigacions, afirmen, és que no s'han obsessionat amb l'estudi de la relació entre la classe social i els aprenentatges dels alumnes per centrar així l'atenció en l'impacte que les escoles poden tenir sobre els resultats escolars, un impacte addicional al de la classe social (Teddlie i Reynolds, 2001). Des de posicionaments crítics, però, s'ha insistit en el fet que aquests estudis no han considerat suficientment el pes de la composició escolar en les seves anàlisis, magnificant així el marge de maniobra de que disposen els docents per incidir en els resultats.

Malgrat la quantitat de recerques realitzades durant les darreres dècades sobre el tema, proporcionalment són poques les que han mirat d'indagar per quins canals es produeix l'efecte composició. En aquest sentit, Van Ewijk i Sleegers (2010a) han afirmat que, en una part significativa de les investigacions, l'efecte composició ha estat tractat com una mena de "caixa negra"; és a dir, un efecte del qual es desconeix la seva naturalesa. Tot i així, el debat entre els estudis d'efectivitat escolar i els seus crítics ha provocat que, de forma progressiva, s'hagin anat situant com a objecte d'atenció les relacions existents entre les variables de procés escolar i les característiques dels alumnes dels centres.

Així, en els darrers anys, diverses investigacions de caràcter quantitatiu han mirat de destriar, mitjançant l'elaboració de models estadístics força sofisticats, l'"efecte net" de les dues dimensions de l'efecte escola; l'efecte procés i l'efecte composició. Aquest tipus d'investigacions permeten conèixer, doncs, en quina mesura la composició influeix de forma directa sobre els resultats dels alumnes (mitjançant processos d'identificació entre iguals o

pressions normatives del grup d'iguals) i en quina mesura hi influeix de forma indirecta, mitjançant la seva incidència sobre les pràctiques pedagògiques i organitzatives dels centres, és a dir, sobre les condicions d'aprenentatge dels alumnes.

Independentment de quins siguin els mecanismes causals de l'efecte composició, podem plantejar-nos si aquest afecta per igual al conjunt de l'alumnat. Ens situem, així, davant d'una qüestió clau a l'hora d'analitzar els efectes de la segregació escolar i, en conseqüència, a l'hora d'analitzar les implicacions que les actuacions en el terreny de la planificació educativa (especialment en matèria de distribució de l'alumnat) tenen tant sobre els resultats mitjans del conjunt de l'alumnat com en el terreny de la igualtat d'oportunitats.

En efecte, conèixer els nivells de simetria –o asimetria- de l'efecte de la composició escolar –és a dir, escatir si influeix per igual al conjunt de l'alumnat o si, per contra, podem identificar alguns grups d'alumnes més sensibles a aquest efecte- és condició *sine qua non* per poder avaluar les implicacions que les dinàmiques segregadores i les polítiques des-segregadores tenen sobre els resultats mitjans del conjunt de l'alumnat, per una banda, i sobre els nivells de desigualtat de resultats, per l'altra (com veurem en el capítol 5, aquesta qüestió centrarà una part important de les anàlisis empíriques que es presenten en aquest treball de recerca).

A mitjans dels anys vuitanta, Willms (1986) va suggerir que, probablement, l'efecte de la composició escolar sigui un joc de suma zero; és a dir, que el "guany" potencial que podrien experimentar els alumnes amb un origen social més humil en accedir a escoles socialment més heterogènies podria ser proporcional a la "pèrdua" que experimentarien en accedir a aquest perfil d'escoles els alumnes procedents de famílies millor posicionades. Per tant, seguint aquesta hipòtesi, les polítiques escolars de "desegregació", alhora que generarien importants beneficis per als alumnes socialment més desfavorits, també implicarien un important descens dels resultats educatius que obtenen els alumnes socialment més afavorits. A la base d'aquest argument hi trobem, doncs, l'assumpció del caràcter simètric de l'efecte composició; és a dir, que la composició escolar influeix per igual al conjunt de l'alumnat.

Altres recerques, però, han suggerit que els efectes de la composició social són de caràcter asimètric. El mateix informe Coleman ja apuntava que eren els alumnes socialment menys afavorits els qui més es beneficiaven del fet d'assistir a escoles socialment més avantatjades (Coleman, 1966). Posteriorment, algunes investigacions han arribat a conclusions similars, destacant que els "guanys" –en termes de resultats- que experimentarien els alumnes de classe obrera pel fet d'assistir a escoles més heterogènies superarien amb escreix les "pèrdues" que experimentarien els fills de classe mitjana en aquestes escoles (Lauder i Hughes, 1990) o bé destacant els diferents nivells de sensibilitat de l'alumnat a la composició escolar en funció del seu nivell d'habilitat, mostrant-se més sensibles els alumnes amb menor habilitat que no pas els alumnes amb una major habilitat (Dar i Resh, 1986, 1992; Luyten i Van der Hoeven-van Doornum, 1995).

En el cas que, efectivament, els efectes de la composició escolar siguin de caràcter asimètric -essent més sensibles a aquest efecte els alumnes amb una situació de partida més desfavorida-, les polítiques de desegregació, malgrat puguin tenir un impacte negatiu sobre els resultats d'alguns alumnes, en termes globals poden generar efectes positius en l'increment dels resultats mitjans del conjunt de l'alumnat, així com en la reducció de les diferències de resultats entre alumnes (principalment gràcies a l'increment dels resultats dels alumnes que, de partida, obtenen pitjors resultats). Com comentàvem anteriorment, doncs, ens trobem davant d'una qüestió d'especial rellevància per les seves implicacions tant en el terreny analític –per poder escatir els efectes reals de les dinàmiques de segregació escolar- com en el camp polític –per poder avaluar els conseqüències de les actuacions (o de la manca d'actuacions) de les autoritats educatives en la gestió de la distribució de l'alumnat-. Malgrat la seva transcendència, però, l'anàlisi dels nivells de simetria/asimetria dels efectes de la composició escolar no ha ocupat un espai preeminent en la literatura acadèmica al voltant de l'efecte composició. b un baix rendiment de partida eren més dependents del context de l'aula i de l'escola, probablement pel fet de tenir menors recursos personals.

1.7 Polítiques d'accés escolar

Durant les darreres dècades, una part significativa de països occidentals han tendit a incorporar, en major o menor mesura, algunes lògiques de mercat en la regulació de l'accés escolar, configurant així el que s'ha vingut a denominar *quasi-mercat educatiu*: "el resultado de una emulación del mecanismo de asignación de mercado para aquellos entornos en los que éste, bien sea por las características del producto o por el tipo de agentes implicados en su intercambio, genera fallos insuperables en el terreno de la eficiencia y/o de la equidad"(Calero i Bonal, 1999; 51).

En el cas específic de l'educació, un model de regulació configurat exclusivament en base als paràmetres del mercat genera notables "zones de fracàs", tant en el terreny de l'eficiència com de l'equitat. En l'aplicació de mecanismes de mercat, doncs, són necessaris sistemes de finançament, regulació i control públic per tal de garantir la consecució d'aquells objectius que la societat assigna a la funció educativa (Calero i Bonal, 1999).

Algunes de les polítiques que acostumen a encabir-se en el concepte de quasi-mercat educatiu són l'existència d'una xarxa escolar diversificada i en competència, la presència del sector privat en la provisió de l'oferta educativa, l'establiment de mecanismes d'autonomia dels centres, la implementació de sistemes de finançament centrats en la demanda, etc. A la pràctica, l'articulació d'aquestes lògiques de mercat ha estat molt desigual als diferents països i sota aquesta denominació trobem sistemes d'accés escolar força diversos (Duru-Bellat, 2004). Podem identificar, però, quatre camins d'articulació bàsics dels sistemes de quasi-mercat, en

absolut excloents entre ells; el finançament públic d'escoles privades, els programes de xec escolar, la diversificació de l'oferta pública i l'autonomia de centre, i la flexibilització de l'assignació escolar per proximitat.

En primer lloc, el finançament públic d'escoles privades ha tendit a materialitzar-se en la dotació de recursos a centres educatius de titularitat privada amb la condició que els seus plans docents s'ajustin al currículum oficial, l'accés de l'alumnat es reguli per uns criteris comuns per al conjunt de centres i no s'estableixin quotes de matriculació als alumnes en les etapes subvencionades. Aquesta política ha tingut una forta implementació en aquells sistemes educatius amb una significativa presència històrica del sector privat (com és el cas de Catalunya). De fet, en alguns casos, aquesta ha estat una fórmula que ha permès donar resposta a la demanda dels centres confessionals per tal de preservar el seu marge d'autonomia en la provisió de serveis educatius.

En segon lloc, els programes de xec escolar es fonamenten en el finançament de la demanda (famílies), mitjançant l'assignació de recursos econòmics per sufragar els serveis educatius rebuts, amb l'objectiu d'ampliar el marge d'elecció de centre. A la base d'aquests programes trobem dues motivacions principals; per una banda, l'establiment de lògiques competencials entre els centres per incrementar els seus nivells de productivitat i eficiència, i, per l'altra, garantir l'accés de les famílies amb menys recursos econòmics als centres privats. La seva aplicació ha estat diversa; en alguns contextos s'han implementat programes de caràcter universal, mentre que en d'altres el xec escolar s'ha desenvolupat com a política focalitzada en alguns sectors de famílies, en funció de diversos criteris; nivell de renda, expedient acadèmic, estudis en curs, etc.

En tercer lloc, les estratègies de diversificació de l'oferta pública i d'autonomia de centre han pretès afavorir l'increment de les opcions de tria de les famílies per la via de garantir una major pluralitat de l'oferta educativa disponible. Un exemple paradigmàtic d'aquesta estratègia la trobem en la reestructuració de la xarxa pública impulsada a finals dels noranta a Anglaterra, que va tenir com a resultat l'establiment de quatre perfils d'escoles; *community schools, foundation schools, voluntary-controlled schools* i *voluntary-aided schools*. L'autonomia dels centres, en termes generals, s'ha plantejat com una estratègia per avançar cap a la desburocratització de la gestió dels centres i cap a una major adequació de l'actuació pedagògica a les necessitats específiques de l'alumnat, entre altres factors, pivotant sovint en base a arguments pròxims al paradigma de l'eficàcia escolar.

En tot cas, des del punt de vista sistèmic, l'increment dels marges d'autonomia dels centres se situa en la lògica de la diversificació de l'oferta educativa, afavorint que les famílies disposin d'una major opció de models formatius i, al seu torn, aquests models s'ajustin a les preferències i a les característiques del seu alumnat. Per altra banda, també cal entendre l'establiment d'aquests marges d'autonomia en el context d'increment de la competència

entre centres implícits en els sistemes de quasi-mercat. En efecte, l'establiment de lògiques competencials entre centres ha estat assenyalat, per part dels defensors de la incorporació de mecanismes de mercat al camp de l'educació, com un factor altament positiu per a la l'increment de l'efectivitat dels centres.

Per últim, la flexibilització de l'assignació escolar per proximitat ha pretès ampliar els marges d'elecció de centre de les famílies tot rebaixant –o eliminant- el pes del criteri de proximitat en l'assignació de places. Podem identificar quatre grans models –en tant que "tipus ideals"- en funció del pes d'aquest criteri en els diferents sistemes d'assignació de places escolars; de zonificació forçosa, de zonificació no forçosa, d'elecció restringida i de lliure elecció (Alegre i Ferrer, 2009). Per aquest ordre, aquests models fluctuen des de lògiques d'assignació de plaça força allunyades dels sistemes de quasi-mercat fins a lògiques molt properes als mecanismes de mercat.

En el model de zonificació forçosa trobaríem aquells sistemes d'accés escolar en els quals la proximitat de l'escola al domicili juga un rol determinant en l'assignació de plaça, atès que l'única via per optar a escoles ubicades fora del radi de proximitat és l'oferta privada independent (no sotmesa a aquesta regulació). En el model de zonificació no forçosa, els alumnes són assignats, d'entrada, als centres de proximitat, però les famílies poden optar a escoles situades fora del seu radi de proximitat mitjançant alguns canals de sol·licitud extraordinària. En el model d'elecció restringida, les famílies expliciten les seves preferències entre el conjunt de l'oferta formativa i les places són assignades respectant aquestes preferències, fixant uns criteris públics de desempat per a aquelles situacions en les quals la demanda en un centre superi l'oferta de places disponibles (en aquest model podríem situar el cas català). En darrer lloc, en el model de lliure elecció les famílies també poden seleccionar el centre que desitgin, però són les escoles les que fixen els criteris d'accés i de priorització de les sol·licituds.

Bé mitjançant la flexibilització de la *carte scolaire*, bé mitjançant la configuració de models propers al quasi-mercat educatiu, durant els darrers anys, una part significativa de països han tendit a incrementar els marges d'elecció de centre de les famílies. Alguns autors han conferit importants beneficis a l'augment d'aquests marges d'elecció, entre ells, beneficis en el terreny de la lluita contra la segregació escolar (Gorard *et al*, 2003; Wöbmann *et al*, 2007). Aquestes argumentacions es fonamenten en la hipòtesi que la llibertat d'elecció de les famílies tendeix a afavorir una distribució més equitativa de l'alumnat pel fet que aquestes es troben competint en condicions d'igualtat per uns mateixos centres, independentment de la seva situació econòmica i el lloc de residència (Godwin i Kemerer, 2002).

Un bon grapat d'estudis, però, han destacat els efectes negatius de l'increment dels marges d'elecció sobre els nivells de segregació escolar (Lauder i Hughes, 1999; Burgess *et al*, 2007). Algunes d'aquestes investigacions apunten, a més, que aquests efectes són especialment

negatius quan l'increment del marge d'elecció es combina amb una major autonomia dels centres, tant en relació a la seva capacitat per seleccionar l'alumnat com a l'hora de definir una oferta educativa diferenciada de la que ofereixen la resta de centres (Vandenberghe, 1998; Maroy, 2008). Aquí s'acostuma a situar com a exemple paradigmàtic el cas d'Anglaterra. En aquest cas, l'ampliació dels marges d'elecció a finals dels noranta no va generar, en termes globals, un increment automàtic dels nivells de segregació escolar. De fet, algunes recerques han assenyalat que, durant els primers anys d'aplicació d'aquesta política, en alguns *Local Education Authority* (LEA) ubicats en contextos urbans mitjans –on les famílies disposaven de xarxes de transport i un accés realment obert a una oferta educativa nova- els nivells de segregació van decréixer (Gorard *et al*, 2003). En anys posteriors, però, l'augment dels marges d'autonomia dels centres (en la selecció de l'alumnat i la definició d'un projecte escolar propi) va generar un increment dels nivells de segregació escolar. En aquesta direcció, alguns autors han destacat que un increment dels marges d'elecció de les famílies combinat amb un increment dels marges d'autonomia de les escoles pot conduir a la generació de processos d'*adaptació recíproca* entre famílies i escoles, que, al seu torn, poden conduir a la configuració d'una xarxa educativa integrada per *nínxols educatius*, és a dir, contextos escolars socialment homogenis i amb característiques específiques (Dupriez i Cornet, 2005).

2. Compendi publicacions

Publicació A

Alegre, M.A. i Benito, R. (2012) "'The best school for my child?' Social geographies of school choice in Barcelona", a *British Journal of Sociology of Education*, 33 (6): 849-871.

Publicació B

Benito, R., Alegre, M.A., i Gonzàlez, I. (2014) "School educational project as a criterion of school choice: discourses and practices in the city of Barcelona", a *Journal of Education Policy*, 29 (3): 397-420.

Publicació C

Benito, R., Alegre, M.A., i Gonzàlez, I. (2014) *"*School segregation and its effects on educational equality and efficiency in 16 OECD comprehensive school Systems", a *Comparative Education Review*, 58 (1): 104-134.

Publicació D

Benito, R., i González, I. (2013). "¿Puede el efecto composición reducir las desigualdades educativas? Una mirada sobre los efectos de la segregación escolar en España y los países del modelo de integración uniforme", a *Revista de la Asociación de Sociología de la Educación,* 6 (1): 49-71.

Publicació E

Benito, R., i González, I. (2012) "L'efecte composició com a factor d'èxit escolar: projecció dels resultats educatius en una proposta analítica d'escenaris segregat i desegregat", a *L'estat de l'educació a Catalunya*. *Anuari 2011*. Barcelona, Fundació Jaume Bofill.

Publicació F

Alegre, M.A., Benito, R. i González, I. (2010) "Measures and Determinants of Student Body Socioeconomic Diversity: Evidence from Spain", a *Journal of School Choice*, 4 (1): 23-46.

Publicació A

Títol: 'The best school for my child?' Positions, dispositions and inequalities in school choice in the city of Barcelona

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'The best school for my child?' Positions, dispositions and inequalities in school choice in the city of Barcelona

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This article deals with the discourses and practices employed by families involved in school choice processes in the city of Barcelona (Spain). It draws upon a study conducted by the authors in 2008/09, and it is based on surveys completed by a representative sample made up of 3245 families, as well as 60 in-depth interviews with families with children at the age of commencing universal pre-primary education (three years old). Firstly, the article focuses on the types of concerns and pressures that families experience when choosing a school for their child. Secondly, we analyse the level and type of knowledge that parents have at their disposal about the field of school choice, as well as how they use and benefit from available information channels. Finally, we identify three unequal positions in which families find themselves when negotiating the field of school choice: 'maximising', 'guaranteeing' and 'displaced'. These positions are, in turn, directly related to families' locations in the social structure, which are also unequal.

Keywords: school choice; school access; parental education; educational inequalities; family strategies

Introduction

In recent decades, the articulations and implications of school choice have given rise to a number of relevant controversies in educational research, policy and practice. In the academic sphere, while research on school choice has a longstanding tradition in those countries and contexts with a more established quasi-market school system (notably, the United States, and the United Kingdom, the Netherlands and Belgium in Europe), a recent wave of research on this topic has also appeared in countries and contexts where quasi-market reforms are not yet so prevalent. The latter refers to the case of many continental Europe countries; that is, France (see the work of Van Zanten and associates cited below), Germany (Noreisch 2007; Kristen 2005;

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Riedel et al. 2010), the Scandinavian countries (West and Ylönen 2010; Lindbom 2010; Rangvid 2010) or the Southern European countries (Green and Vryonides 2005; Escardíbul and Villarroya 2009; Olmedo and Santa Cruz 2008; Checchi and Jappeli 2007).

This article draws on studies that have approached school choice from a critical perspective. More specifically, we engage with the work carried out by Stephen Ball and Agnes Van Zanten in England (in London, in particular) and France (in Paris, in particular), respectively. To summarise, both Ball and Van Zanten conclude that, due to a number of factors associated with families' cultural, social and economic capital, the better educated middle-class parents are those that benefit the most in the field of school choice. This competitive advantage, which exists both in quasi-market contexts and in the context of systems where school choice is subject to public regulation (Raveaud and Van Zanten 2007), gives these families a wide margin for operating filtering logics towards their 'social closure' (Ball 2003) in certain 'circuits of schooling' (Ball, Bowe, and Gewirtz 1995). Given that it is 'the pupils who go to the school' (Van Zanten 2006) that form the basis of judgments about the 'good' or 'bad' quality of schools, such filtering logics make school choice both a cause and a consequence of school segregation.

Certainly, the moral dilemmas raised by the middle classes in England and France are articulated and resolved in diverse ways in as far as they interact with policies and social values associated with school choice that differ between the two countries. While in England these policies and values incentivise (and legitimise) competitive, individualist choice behaviour, maximising the diversity of options offered by the educational market, in France the dominant ideological vector behind educational policies (and school access) continues to emphasise the ethics of equality, solidarity and social cohesion. In this sense, although processes of school choice for middle-class families in both countries entail tensions between being a 'good father/good mother' and being a 'good citizen', the extent of these tensions is not the same for English families as it is for French ones (Butler and Van Zanten 2007).

In this article we apply the Bourdieuian metaphor of the playing field to interpret the meanings, structure and processes of school choice, hence expanding on how Ball and Van Zanten approach this topic (among others, see Bowe, Ball, and Gewirtz 1994; Reay and Ball 1997; Van Zanten 2003). According to Bourdieu (Bourdieu and Wacquant 1992, 98–101), the pressures defining a playing field are the result of competition between agents who are trapped in the game and who are convinced that it is worth playing. In as far as the agents' perceptions and knowledge of the field (their point of view *on* the field) depend on the position they occupy in it (position *in* the field), it is anticipated that their practical strategies will depend on the basic capitals (economic, cultural and social) that open up or close off the possibility of arriving at the various positions. This is where the notion of

'habitus' comes in, and it is in this sense that Bourdieu criticises rational choice theorists (Bourdieu 1990). Actually, certain orientations implied by habitus can give rise to conscious and thoughtful instrumental calculations. However, Bourdieu argues that the 'rational' habitus represents a particular case, the product of a particular economic and social condition defined by possession of the minimum economic and cultural capital required to be aware of the potential opportunities that are formally offered and to be able to attain them (Bourdieu and Wacquant 1992, 124).

From this perspective, and elaborating on research conducted by the authors between 2008 and 2009 in the city of Barcelona (Spain), this article focuses on two strategic points that emerge during the processing of school choice decisions, specifically when dealing with a child's entrance into universal pre-primary education at the age of three.[1] Firstly, we focus on the type of concerns and pressures that families experience when facing school choice. Secondly, we analyse how families get access to – and benefit from – knowledge about the coordinates and mechanisms structuring the playing field itself.

Approach

Context: school choice in Barcelona

The framework governing school choice in Catalonia (and in Spain) is similar to the model that, elsewhere, we have labelled 'restricted choice' (Alegre and Ferrer 2010). In this model the allocation criteria used by local authorities are implemented only in the case of over-subscribed schools, giving priority to the enrolment of students with the highest scores according to these criteria, while pupils with lower scores are reallocated to other schools with available places.

In Catalonia, the latest official policy statement on enrolment (Departament d'Educació 2007) establishes the following general criteria for prioritising admissions to publicly funded schools (both public schools and private dependent schools): having siblings at the chosen school or working there; living in the school's catchment area or the parents' place of work being located in it; living in the same municipality as the chosen school, but not in its school catchment area; mother or father receiving a minimum public income; and any member of the family having a level of disability equal to or greater than 33%.

In 2008 the city of Barcelona introduced a school assignment policy that goes somewhat beyond the logic of school catchment areas. One of the objectives behind this new policy was to limit school segregation processes in a city where 53% of the total number of elementary schools were private (46% subsidised private schools, 7% independent private schools), and where only public schools were subject to the regulation of local school assignment policies (including catchment areas). In the former sce-

nario, then, private schooling represented an easy option for native middle-class flight from public schooling, which increased socio-economic and ethnic segregation between different types of schools across the city to a degree that has not yet been documented. In accordance with the new policy, families are guaranteed the availability of a significant variety of schools (generally three public schools and three subsidised private schools) for which they have the maximum points in terms of proximity. Although the City Council and the Catalan Department of Education aim to guarantee each child a place in one of the indicated nearby schools, the tensions between supply and demand, the dynamics of family choice and the operation of the place allocation process itself make it difficult to ensure that all children obtain a place in one of those schools. At the same time, it is also clear that the range of schools included in each of the various lists can be very different, depending on multiple variables (e.g. the secular or religious nature of subsidised private schools, the image of public schools, the level of ghettoisation of some schools, and different educational approaches). All of these elements add complexity to reflections on and strategies within school choice processes, which in Barcelona have not yet been studied.

Quantitative approach: the questionnaire

In this article, we work with the responses given by families to a questionnaire administered by the Barcelona Education Consortium in May 2008, just after the completion of the pre-enrolment process for the 2008/09 school year. As previously mentioned, we focus here on a representative sample of families with children at the age of commencing pre-primary education. The survey sample (n = 3245; 23% of all families in Barcelona) includes a significant range of socio-economic profiles and districts of residence of families in the city.

The purpose of this survey is to collect information on two levels. Firstly, the responses provide us with structural data, such as the parents' level of education, their country of origin, the language they normally use at home, and so forth. In this article we refer to the individual variables that have been shown to be most significant in the statistical operations carried out: the family's educational capital and the family's immigrant background. Secondly, the questionnaire focuses on gathering information relating to the logic of school choice, structured into four levels: (1) level of importance given to school choice; (2) factors for choosing and ruling out schools; (3) knowledge of the playing field and use of information channels; and (4) final choice made. This article focuses its attention on the most strategic elements of the choice; that is, on the responses to some of the questions included in sections (1) and (3) of the questionnaire.

Qualitative approach: in-depth interviews

We consider the empirical material extracted from 60 in-depth interviews with different profiles of families with children ready to commence pre-primary education. Through this technique we examine the motivations, projections and legitimisations underpinning families' decisions and practices when choosing schools. When dealing with subjects such as school choice, it is particularly useful to adopt a continuous exercise of comparing the results obtained using statistical techniques with the information collected through intensive qualitative research. In other words, we elaborate on the combination of quantitative data (from surveys) and qualitative data (from interviews) to retrace those family discourses and practices that form the basis of the organising principles of the playing field of school choice.

Two selection criteria were considered when selecting the families to be interviewed. Firstly, families were selected according to their educational level (balancing the number of families with compulsory education or lower, with post-compulsory education and with university education) and immigrant background (of the families interviewed, 15 were born abroad). Secondly, we chose families living in diverse areas of Barcelona in order to capture contrasting residential contexts in terms of socio-economic conditions and the presence of immigration.

Family concerns about school choice

We focus here on the type of concerns and pressures that families experience when facing school choice decisions. We pay particular attention to the scope of the inequality in the distribution of such concerns and pressures between the different groups of families.

Unequal pressures

We first look at the responses families give when the questionnaire asks about when they began to think about the school in which they would like to enrol their child. Here we evaluate the degree to which parental educational capital and immigrant background affect whether families begin to consider school choice during the pre-enrolment period, at the beginning of the current school year, or even during the previous school year (see Table 1).

A look at the totals shows that 42.7% of all families ticked the last option (started to think about school choice during the previous school year), 35.2% stated that they had been thinking about school choice since the start of the current school year, while 22.1% did not start thinking about it until the pre-enrolment period began. The results of a logistic regression highlight the fact that better educated families and native families tend to start thinking about school choice earlier. More specifically, families with post-compulsory education are almost three times more likely than

Table 1. Anticipation in concern for school choice, multinomial logistic regressions.

	During the pre-enrolment process (22.1%)			Since the start of this school year (35.2%)		
	Exp(*B*)	Significance	SE	Exp(*B*)	Significance	SE
Educational capital						
Compulsory	8.108	0.000	0.015	1.575	0.000	0.011
Post-compulsory	3.133	0.000	0.015	1.234	0.000	0.010
University	Ref.					
Immigrant background						
Foreign	4.921	0.000	0.013	1.567	0.000	0.013
Native	Ref.					

Note: Reference category of the dependent variable: 'Since the previous school year' (42.7%).

university-educated families to have started thinking about the school they want only during the pre-enrolment period (rather than having considered it during the previous school year). The disparity between university-educated families and families having completed only compulsory education (or less) is even greater: the probability that the less educated families do not think about the school they want until the pre-enrolment period is seven times greater than the probability for the more educated families. As for the importance of a family's immigrant background, when controlling for the effect of educational capital, foreign families are still 4.9 times more likely than native ones not to have thought about the school they want until the pre-enrolment period has begun (instead of having thought about it since the previous school year).

The 'paradox' of family control

The importance placed on school choice is necessarily related to the confidence families have in their capacity to mediate in the school influences to which their children may be subject during their educational careers. From this perspective, the conclusion might be drawn that the weight of school choice problematisation should be higher for families who feel less capable of controlling the educational progress of their children – families with less self-esteem in terms of their chances of moderating the school influences. Conversely, we might expect a lower level of concern about school choice in the case of families with a high level of conviction about their own capacity to guide their children educationally, by correcting or balancing the social and/or pedagogical influences of the school as necessary. Nonetheless, the empirical material collected points rather in the other direction.

We see, for example, the case of families who are particularly concerned about the specific details of schools' pedagogical approaches. These are indeed highly educated families who, in the school choice process, place particular importance on the possibility of extending their 'socialisation styles' (Kellerhals and Montandon 1991) to the educational code of the schools in question. In other words, beyond the characteristics of the school's social environment – whose influences they are convinced they can control – these families seek affinity between the way their children are brought up at home (which is considered to be the optimum way) and the way they are educated at school. Here, the focus tends to be on finding a match between the expressive values of these two different socialisation spaces:

> Well, above all we liked the educational approach of the school we chose as its aim is for children to be capable of doing things themselves … I mean, they want them to have the tools to investigate, to get information for themselves, to be autonomous and independent […] within a typical school education, which is achieving a degree of knowledge, but they also get them

> to develop as people and learn social values that we share at home as well. (Mrs Collell, university education)

The main factor explaining the increased pressure felt by a wide range of families to make a 'good choice' of school is in the call to responsibility associated with being a 'good' mother or 'good' father. In this sense, school choice comes to form part of the moral dilemmas experienced by many parents in exercising their basic functions and responsibilities. Being concerned about the specific features of the school in which their child will enrol forms part of the 'natural' action through which these families deploy their power to guide their offspring's upbringing:

> We've spent … we've thought about the issue because, at the beginning, sometimes you think: 'Goodness, I haven't thought about that' […]. At the first school open day there were parents who went to the meetings with long lists of questions. And you wonder 'Am I a bad mother?' […] After that experience, you just do the same, because if you take care of your children, then you have to worry about the school you are sending them to. That's normal. (Mrs Majó, university education)

In contrast, other families express a distant, almost hierarchical respect towards educational institutions in general, and more specifically towards the schools from which they can choose. Particularly common amongst parents with less educational capital, such a disposition is based on attitudes of dissociation, even estrangement, which identify the schooling process as something that goes beyond the family's legitimate control; education is a field in which they do not have the necessary competence to intervene or even have an opinion. In addition, such dispositions are accompanied by a fairly undistinguishing view of the pedagogical features of schools:

> And school X … it doesn't matter to me, it's just the distance that annoys me. Why do they teach like this or like that … what do we know about it? Well, if they hit the children, of course, that's something else, but if they teach one way or another I'm not qualified to say anything about that. (Mrs Pérez, compulsory education)

Knowledge of the playing field

Agents' actions and strategies depend on the knowledge they have about the coordinates and mechanisms structuring the game, the formal (and informal) opportunities offered, and the rules defining the competition in question. The way that decisions resulting from the intersection of preferences and available knowledge are subsequently taken – whether they are evaluated more or less rationally (Elster 1989), reasonably (Boudon 2003), or as the result of one or other socially conditioned practical sense (Bourdieu and Wacquant 1992) – is another matter.

Transferred to our subject of study, this knowledge refers to two central components of the game. Firstly, it is necessary to consider the level and type of information that families have of the one factor that, at least theoretically, seeks to promote a certain level of equality in school access conditions: the system of school assignment (and more specifically, the criteria for prioritising school admissions). Secondly, we have to refer to the ways families use and benefit from the specific channels through which they obtain information about the schools and the framework that regulates access to them.

Knowledge of school assignment rules and the use of information channels

Table 2 shows the degree to which educational capital and immigrant background affect families' knowledge of the scoring criteria applied to the allocation of school places. It shows the probability of a family having completed the pre-enrolment process without being entirely aware of these criteria (the case for 14.9% of all families), having found out about the criteria during the pre-enrolment process (42.8% of all families), or having known about them before this process (42.3%). With regard to educational capital, logistic regression results show that families with post-compulsory education are 2.6 times more likely than university-educated families to have completed the pre-enrolment process without knowing about all of the scoring criteria, while this probability is 10 times greater for families with only compulsory education (or lower) when compared with university-educated families. Notable differences also appear in terms of the importance of immigrant origin: families of foreign origin are seven times more likely than native families to have completed the pre-enrolment process without being entirely aware of the scoring criteria.

We should also consider the extent to which parents use the various channels that provide information about the school choice process. In Table 3, percentages in parentheses identify the information channels that appear to be most used by all families. As we can observe, two information channels in particular are equally widely used: direct consultation with the schools being considered, and the information obtained from family, friends and/or acquaintances. Both information channels are used by more than 50% of all families in the sample. Coming in slightly behind these primary channels are the Internet and the Official School Guide, which are utilised by 38.5% and 34.8% of families, respectively. Finally, channels such as consulting acquaintances working as teachers or consulting municipal education services or offices are clearly shown to be the least common means of obtaining information.

Here we can make a distinction between, on the one hand, channels that are more frequently used by university-educated families (we might say,

Table 2. Knowledge of the criteria for prioritising school admissions, multinomial logistic regressions.

	Not entirely (14.9%)			Yes, during pre-enrolment (42.8%)		
	Exp(*B*)	Significance	SE	Exp(*B*)	Significance	SE
Educational capital						
Compulsory	10.146	0.000	0.018	2.226	0.000	0.011
Post-compulsory	2.599	0.000	0.019	1.612	0.000	0.009
University	Ref.					
Immigrant background						
Foreign	7.387	0.000	0.014	1.177	0.000	0.012
Native	Ref.					

Note: Reference category of the dependent variable: 'Yes, before pre-enrolment' (42.3%).

Table 3. Information channels used, binomial logistic regressions.

	Directly from schools (69.8%)			Families, friends and/or acquaintances (51.4%)			Internet (38.5%)			Education Consortium Guide (34.8%)			Nursery (23.0%)			Teacher acquaintances (7.6%)		
	β	Sig	SE	β	Sig	SE	β	Sig	SE	β	Sig	SE	β	Sig	SE	β	Sig	SE
Educational capital																		
Compulsory	0.239	0.000	0.011	0.429	0.000	0.010	0.205	0.000	0.011	1.264	0.000	0.010	1.285	0.000	0.011	0.151	0.000	0.025
Post-compulsory	0.544	0.000	0.011	0.688	0.000	0.009	0.450	0.000	0.009	1.430	0.000	0.009	0.651	0.000	0.011	0.475	0.000	0.016
University	Ref.																	
Immigrant background																		
Foreign	0.343	0.000	0.010	0.612	0.000	0.010	0.233	0.000	0.013	1.187	0.000	0.010	0.683	0.000	0.012	1.178	0.000	0.019
Native	Ref.																	

Note: Channels not included in this table: 'Education offices' (2.8%); 'Others' (2.6%).

'over-capitalised channels') and, on the other hand, channels that are more commonly used by families with only compulsory education or less (we might call them 'under-capitalised channels'). Among the former are: direct consultation with the schools being considered; consulting families, friends and/or acquaintances; use of the Internet; and consulting friends and acquaintances working as teachers. For example, the results of the logistic regressions indicate that, compared with the least educated families, university-educated parents are four times more likely to consult the schools directly, more than twice as likely to use their network of family and friends, five times more likely to use the Internet, and seven times more likely to make use of contact with acquaintances working as teachers. Under-capitalised channels would be: consulting the Official School Guide, and obtaining information from the school currently attended by the child (nursery). Families with lower educational levels are slightly more likely to have used these channels than university-educated parents.

With regard to families' immigrant background, we observe how the channels we have categorised above as over-capitalised are also those that native families tend to use to a greater extent than immigrant families, while immigrant families show a greater tendency to use the so-called under-capitalised channels.

'Privileged' access to knowledge: the mobilisation of social capital

According to Bourdieu (1997), social capital provides support and actual or potential access to resources (including information resources) that are highly valued in a particular field. From this perspective, the profile of the social networks conditions their general chances of accessing high-quality or low-quality information based on more or less direct and reliable knowledge. In as far as social capital is constructed precisely through its mobilisation (Gamarnikow and Green 1999), families can achieve competitive advantages on the playing field in question by accessing sources of information characterised by a certain degree of privilege. The type of informal networks that socially advantaged families tend to have at their disposal allows them to turn the 'hot knowledge' (Ball and Vincent 1998)[2] provided by these networks into a valuable and therefore highly utilised resource.

There are a number of inherently privileged sources or channels of reliable knowledge about the real situation in schools. Hence, the level of proximity of the agents to these intermediary sources will, at least initially, establish differences amongst the agents' opportunities to access quality information. We could, for example, refer to the possibility of obtaining information about schools and, more generally, about the school assignment system from teacher acquaintances or trusted people linked to services or bodies working in the field of education (e.g. municipal services, Department of Education, school boards). As observed above, although this is one

of the least used information channels, it represents a highly over-capitalised access route to knowledge:

> Look, I've got a friend who's a psychologist and goes to different schools, so talking to her has also given me some idea about the schools in the district, the diversity, their educational level, the type of teacher. And well, she said to me … I don't recommend you to send your daughter there. (Mr Rossell, university education)

Here we are dealing with families' knowledge positions that we might classify as particularly privileged. Starting with this privileged nucleus, the other knowledge positions are arranged following a pattern of concentric circles. In this sense, the chances of obtaining reliable first-hand knowledge become a series of distance degrees. As these distances become greater, families resort to the sphere of 'typical knowledge' – that is, sets of attributes and categorisations stemming from judgements and prejudices that circulate in various areas of personal interaction and that are based on referential elements that constitute rather unreliable evidence (e.g. rumours, local myths, extraordinary events).

Regardless of their social profile, the families interviewed frequently refer to the value they give to information about particular schools that is passed on to them by other parents who send their children there:

> As I live near here, and I've got three schools around here … And my mother and the neighbours say one of them is fine. People with children older than my daughter say it's fine, and when we went in I liked it and so on … (Mrs Martínez, compulsory education)

Thus, through the same social capital mobilisation effect, clear lines of continuity are articulated between the profile of the families seeking information, the profile of the families providing it and the profile of the schools to which this information refers. Spaces of connection such as family networks, the district, the work environment, and so forth, become important in reproducing a sequence that stratifies the process of accessing knowledge right from the start.

The dominance of 'cold' knowledge access routes

The debate about the value of information channels is inseparable from the discussion on the way in which they are handled and exploited. Here we would like to refer briefly to one information channel that has proven to have unequally used in the sample: family interviews with teaching or management staff at schools.

As Ball (2003) reminds us, handling such situations of formal personal interaction – where the formality derives from the presence of an expert

voice (the school representative) – requires the mobilisation of specific communicative, cognitive and strategic capacities that are unequally distributed across individuals and groups. In other words, it is the possession of these capacities – which are associated with families' cultural capital – that gives parents more or less of a margin to benefit from the interview situations we are referring to.

Firstly, parents need to correctly process the references with which schools identify their educational approaches – as an integrating school, a green school, a school focused on excellence, on competences, on intercultural education, on cooperative learning, and so forth; they need to situate the value of these attributes in relation to the rhetoric with which schools present themselves. At the same time, they need to know how to contextualise the information offered in comparison with the information obtained through other channels. It seems clear that the greater their knowledge of the cultural codes prefiguring the interaction context in question, the greater the families' capacity to know how to find out what they want to know; how to ask for information or advice and about what:

> The head is from the district, another coincidence. We talked and I saw she was a very accessible person. We asked her about the key things for us. I mean … How do you work with diversity? What are the most common types of conflict? How many intake classes are there? What type of children go there? (Mr Millet, university education)

Furthermore, when the cultural codes of the family and the school match, an optimum handling of these situations can therefore give room to specific agreements and commitments between the parties. For example, it is not unusual for school representatives to agree to keep certain families updated throughout the pre-enrolment period about the number of school places that remain available at each moment. In this way, these families have access to accurate, reliable knowledge in real time about the behaviour of school demand, which allows them to refine their calculations of the probabilities of success if they choose their preferred school:

> So, I waited until the last day to do the pre-enrolment and phoned the two schools I liked to see how many people had applied. Then, on the last day, they both told me that they were already full up with those who had already enrolled and that, as I didn't have proximity points, I wouldn't get in, of course, because I wasn't in the same zone … (Mrs Ribó, university education)

Synthesis

We develop here a statistical typology to capture the intersections of some of the main parameters so far presented. Firstly, we operate a multiple correspondence analysis based on four variables: level of anticipation in starting to think about the school choice process; degree of knowledge of the criteria

for prioritising school admissions; level of mobilisation of social capital; and number of schools visited. Based on these initial results (Figure 1), we use cluster analysis to group the families depending on the position they occupy in relation to the four variables mentioned. As a result, three broad family profiles or positions in the field of school choice are identified.

These three groups of families have significant internal homologies that clearly differentiate them from the other groups, in terms of school choice dispositions as well as in terms of their educational and ethnic composition (Table 4).

Group 1: 'maximising' families

Here we identify the families who anticipate their concern about the school choice process the most and who also have a considerable level of knowledge of the school choice playing field. As can be seen in Figure 1, this family profile is located at the conjunction of the following points on the four variables used for the typology: having started to think about school choice during the previous school year; knowing about the scoring criteria before starting the pre-enrolment process; having visited five or more schools; and having a 'high' social capital (having mobilised direct contact with teacher acquaintances, among other information channels). These families represent 33.3% of the population surveyed.

These are parents who problematise the influence that a school – due to its social environment or its pedagogical orientations – can have on conditioning their children's educational opportunities. In most cases, the group of schools offered for selection is perceived as a set of *unequal* schools,

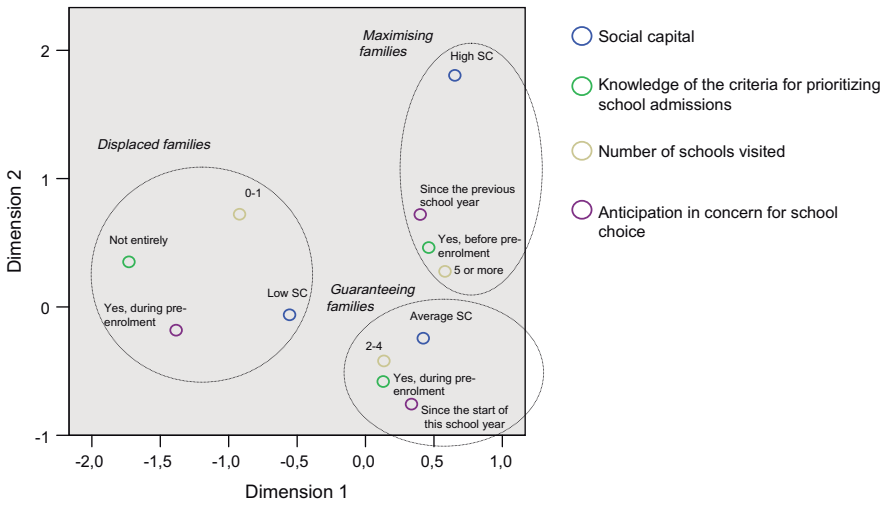

Figure 1. Family typology, multiple correspondence analysis.

rather than a range of *different* schools. This perception puts pressure on these families to achieve a good competitive position in the following areas: knowledge of the rules and options available in the game; access to and exploitation of formal and informal channels of information; and deploying specific practices aiming to ensure a 'good' choice of school:

> The Internet, families, people who might work in the same school – because we have friends who work in schools and they also gave us their point of view – we've done everything we could and more. We've got friends from different school boards; we've also spoken to all of them so they can tell us which schools are the best ones and then who we need to talk to to find out how best to get in … I mean we've done everything. (Mrs Pujol, university education)

Both the quantitative analyses and the interviews carried out indicate that this position is particularly common among native families with a high level of education. As can be seen in Table 4, 91% of families in this group are native and 51.7% have university education. Their high level of social capital, which facilitates the mobilisation of direct links with professionals from the world of education and/or experienced parents involved in schools, together with their high level of cultural capital (understood here as a cognitive resource) allows them to process and handle all information channels as efficiently as possible – both those with a strong formal component (meetings or interviews with members of the schools' management teams) and those requiring the comprehension and correct decoding of 'cold' knowledge (documents or informative guides, content accessible over the Internet). Meanwhile, their high level of economic capital gives them the opportunity to opt out of the formal public school sector and to end up choosing fee-paying schooling (i.e. private schooling).[3]

In general terms, these families recognise the school as a space belonging to the collective 'us', over which they have the responsibility (and should have the right) to exercise a high level of control. For these families, being concerned about the social and pedagogical characteristics of the school of choice forms part of their 'natural' obligations as fathers and mothers. In this perspective, the limits to free choice imposed by the assignment system – limits largely represented in the operation of the proximity criterion – are none other than limits on the exercise of responsible parenting aiming at achieving the best possible education (in the right school) for the offspring:

> Look, I think it's difficult … if education is compulsory we should have a degree of freedom when it comes to choosing the school we want our children to go to. […] Also because, of course, it's the classification … of course … proximity or brothers and sisters is a way of restricting it, isn't it; saying that, well, you have to stay with him, and him and her. If you want something else you can't get in through proximity or … you can't get in, and you like that

Table 4. Family typology, according to educational capital and immigrant background.

	Relative weight	Educational capital (%)				Immigrant background (%)		
		University	Post-compulsory	Compulsory	Total	Native	Foreign	Total
Group 1	33.3	51.7	34.5	13.9	100	91.8	8.2	100
Group 2	45.3	33.3	40.4	26.3	100	86.1	13.9	100
Group 3	21.4	12.5	29.9	57.6	100	49.3	50.7	100
Total	100	35.0	36.2	28.8	100	80.1	19.9	100

> one instead. […] I really don't see the sense in that. (Mrs Claret, university education)

Group 2: 'guaranteeing' families

We refer now to those parents who enter into the competitive dynamics of the field being 'infected' by the expansive logic of school choice concerns and pressures. Amongst these families, however, the intensity of such 'contagion' is certainly heterogeneous. As we see in Figure 1, 'guaranteeing' families occupy intermediate positions along the variables used in the typology; that is, they started to think about school choice during the current school year; they knew the scoring criteria from the beginning of the pre-enrolment process; they visited between two and four schools; and they have an 'average' social capital (they consulted friends and/or acquaintances, among other information channels). Meanwhile, the degree of heterogeneity of their educational profiles is also significant (Table 4). Overall, these families represent 45.3% of the whole sample.

Within this position we often find the confluence between, on the one hand, a certain level of tolerance for, or even indifference to, the social and pedagogical characteristics of the school of choice and, on the other hand, a certain degree of pressure to obtain sufficient knowledge of the field to *guarantee* that they have a chance of getting a place at one of their selected schools, most often optimised by their proximity to it. It is not that these families do not place importance on the influence that schools can exert over their children's education opportunities, but rather that they are not convinced that the range of available choices offers a significantly unequal set of options. And if the orientations or realities at the chosen school never go beyond the limits of this tolerance, some of these families – particularly those with greater cultural capital – share the conviction that they will always be in time to compensate for any perverse effects that may arise. Aside from differences in terms of context, this last particular position is, to a degree, in line with that of the middle-class English families studied by Crozier et al. (2008) – families who, although they could opt for alternative schools, decide to go for the local comprehensive:

> It's also true that teachers and education experts sometimes perhaps slightly exaggerate the influence exerted by the school on a person's upbringing, and I believe there are other factors, particularly the family, the family environment. If children see their parents have the house full of books and read, that automatically means this will be a factor that will very clearly influence their future education […]. If we had seen all the schools and seen they were all dreadful, we wouldn't have had any choice other than to look for another solution but … it wasn't like that. (Mrs Collell, university education)

Unlike the families in this particular position, but falling into the same general category, we would also talk about those families who express con-

cerns, even anxieties, about the school choice process fundamentally because they feel disorientated on the playing field, unsure of how to control its codes and regulation mechanisms. This lack of confidence pressurises these parents to collect at least some fairly reliable evidence, ensuring that they avoid unwanted risks in making their decisions. This particular feature is especially common among families with little educational capital and/or immigrants dealing with the choice of schools for the first time:

> What really concerned me was not having information from someone who'd already been there. Like here, before signing up for anything, what I would do first would be to talk to people in the park to evaluate them and tell me, 'This one yes, this one no, this one whatever' … (Mr Garcia, post-compulsory education)

Group 3: 'displaced' families

This family profile is drawn up from the conjunction of the following categories: having started to think about choice of school during the pre-enrolment process; not knowing all the scoring criteria (once the process is over); not having visited any schools or having visited only one; and having a 'low' social capital (not having consulted acquaintances nor teachers). Therefore, here we would place the minority group of families (21.4% of the sample) living at a distance from the 'contagion effect' of concern for school choice and the pressure to seek information that might generate possible competitive advantages on this playing field.

This positioning particularly involves parents with a low educational level, as well as foreign families from poor countries. As shown in Table 4, more than one-half (57.6%) of 'displaced' families completed only compulsory education (an educational profile that, in the sample as a whole, has a weight of 28.8%) and one-half (50.7%) are from abroad (a group that has a weight of 19.9% in the sample as a whole).

All this does not mean that the families included in this category do not place any importance on their children's educational opportunities. The primary characteristic of the 'displaced' families is that they do not include concern for the specific school in which they will enrol their child within the general importance given to their education. When faced with the choice process, these families feel they must choose not between unequal schools but between *different* schools, which are not perceived as likely to condition their children's educational aspirations. As we have seen above, this belief is often ultimately based on a certain general scepticism about the margin attributable to school influence on the educational careers of children:

> The truth is that, afterwards, on the list, we filled in the six boxes almost at random, because it was more or less all the same to us. If he got into the first

> option that was great, because it was round the corner from home, but afterwards it didn't really matter to us, honestly […] Things change, but the schools are on the list, they teach more or less the same things. The important thing is the child, not the school. (Mrs González, compulsory education)

Consequently, there are few stimuli pressurising these families to achieve a good competitive position either in the area of knowledge of the rules and options available in the game or in access to and exploitation of the formal and informal channels and sources of information. This displacement from the playing field is not only the result of subjective dispositions finally leading to the de-problematisation of school choice, but it is also based on the volume and structure of their capitals: their social capital limits their contact with informed networks with access to privileged information about the playing field; their cultural-cognitive capital makes it difficult for them to decode the mechanisms and meanings making up the range of available options; and their economic capital leaves them no alternatives such as school transport or, even less, private schooling.

Conclusions

This article has tried to connect with the contributions of Ball and Van Zanten in terms of the processes, mechanisms and filters structuring the field of school choice in England and France, respectively. As stated in the Introduction, the moral dilemmas and concerns raised by English and French families when facing school choice are differently articulated as they interact with distinct policy frameworks and ideologies associated with this issue, as well as with distinct socio-economic, urban and school network realities. The quantitative and qualitative data presented in this article would appear to support the argument that, in Catalonia (or at least in Barcelona) the competitive logic of the field of school choice tends to be closer to the English case than the French one, always with its own important nuances and particular features. We have shown that a vast majority of families with a higher level of cultural capital feel pressurised to maximise the results of their school choice and that they act as a consequence of this – that is, they gain access to the best possible knowledge about the operation of the field and take advantage of the margin of action it opens up. Moreover, this way of facing school choice (and the set of strategic movements that accompany it) is usually justified by the claims of family responsibility; there is no discourse referring to the degree to which certain school choice strategies could be limiting the capacity of other families' choices, and also none regarding the possible conflict between these responsibilities and a commitment to the public interest. A more in-depth investigation is certainly required of the true scope of this de-ideologisation process within the Catalan middle class, and of the possible areas of comparability with other settings and contexts.

Attention should also be paid to the possible impacts that could result, in this sense, from the state and development of public opinion on the deficiencies of the Catalan education system. Indeed, both in the mass media and in the political sphere, there is a tendency to deliver a message with the following diagnosis and the following proposed solution: the educational results of schools are mediocre and unequal (i.e. they are better in private schools and worse in public schools), a problem that can be solved by granting greater autonomy and leadership capacity to schools to manage their resources and define their pedagogical approaches; by granting greater freedom of school choice to families so that, regardless of their economic situation and place of residence, they can compete on equal terms for the same schools; and increasing accountability mechanisms likely to make the objective results of these implementations clear. In fact, regulations such as the Catalan Education Act (Departament d'Educació 2009) and the School Autonomy Decree (Departament d'Educació 2010) give rise to a series of actions promoting the deepening of quasi-market mechanisms in the education system.

The escalation of competition that goes hand in hand with families' concern for school choice means that increasing numbers of families are entering the corresponding playing field seeking efficient mechanisms to position themselves advantageously, at least to achieve minimum guarantees for the final result of the choice. However, the inequalities between the strategic positions of the different families, and more specifically the fact that a significant number of them remain in positions of displacement, make it easier for certain agents to maintain control over the necessary mechanisms for reproducing their privileged positions in the game of school choice.

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Notes

1. In Spain, the pre-primary stage is not compulsory but it is 'universal', and attendance rates are almost 100%. This stage comprises the academic years of P3, P4, and P5, which correspond to three, four, and five years of age, respectively.
2. With this expression, the authors refer to the informal sense of the specific information gathered in relation to concerns about shared interests and values.

3. In a similar way for the case of Ireland, Lynch and Moran have documented how the convertibility of economic capital permits middle-class parents to create an alternative educational market in the private sector to help secure their children's future class (Lynch and Moran 2006).

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School educational project as a criterion of school choice: discourses and practices in the city of Barcelona

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In its advancement towards an education quasi-market, Catalonia has recently been driving the development of *school educational projects* in all schools (both public and private) as a tool to facilitate school autonomy and family choices. A school educational project is a formal document in which schools identify their pedagogical goals, missions and orientations, their academic resources and organisational structures. Through the analysis of 60 in-depth interviews with parents of children at the age of commencing universal pre-primary education (three years old) and data collected from surveys completed by a representative sample made up of 3245 families, this article explores the impact of this policy on discourses and practices of school choice amongst families in the city of Barcelona. On the one hand, we observe that interest in educational projects has penetrated the discourses of the most educated parents, even though, at the same time, we detect a generalised lack of knowledge of the content of such projects. On the other hand, we note that the social composition of schools is still a prominent factor in choice practices. Such findings question the ideal of the autonomous and rational citizen-consumer that underlies the policy of establishing educational projects.

Keywords: school educational projects; school autonomy; school choice; parental education; quasi-markets; critical policy analysis

Introduction

There is a significant body of literature centred on quasi-markets in education, within which this concept is seen to comprise of multiple and diverse components: the existence of a diversified school supply; the implementation of funding systems that focus on demand (*money follows the student*) and on incentives for teachers; the generalisation of school autonomy mechanisms (in both public and private schools) in the definition of the curriculum, the administration of resources, budgets and student admission systems; the implementation of accountability methods; the liberalisation of the margin of school choice for families, etc. To simplify, this group of 'policy technologies' (the Foucauldian term applied to education policy by Ball [2007]) is anchored in two general dimensions – freedom of choice (on the side of educational demand) and freedom to differentiate (on the side

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of school supply) – and relies on the principle of self-regulation as a mechanism of system adjustment. Despite significant variation in the intensity with which these logics have penetrated school regimes and the way they have been applied practically, it can be argued that they are developing on a global scale (Ball 2012). Even countries that were models of public provision and regulation of the education system in the past have, in recent years, begun to introduce market logics and techniques in education administration, both in terms of coordinating supply and managing demand. Such is the case, for example, of the Scandinavian countries (Bunar 2010; Lindbom 2010; Rangvid 2010; West and Ylönen 2010). Spain and, more specifically, Catalonia – where the private sector has an historical presence in the educational supply side – have now embraced such logics and techniques with a new impetus.

Indeed, Catalonia has recently begun moving towards educational marketisation (Alegre, Rambla, and Valiente 2009). In terms of demand, the vast majority of Catalan municipalities have widened the formal margins of school choice through the application of more flexible proximity criteria. Yet the most significant changes that have been implemented relate to the (re)structuring of the school supply, through school autonomy policies. In this vein, since the beginning of the 2000s, both public and state-subsidised private schools have been required to provide a definition of their own educational projects – a policy document in which schools establish and publicise the general principles of their pedagogical orientation in the framework of exercising school autonomy. As a result, the development of educational projects has acquired a great deal of notoriety in Catalonia in political, media and social spheres, where it is positioned as a policy that favours more informed and responsible school choices. This culminated in the inclusion of school educational projects as a core element of the Catalan School Autonomy Decree, launched in 2010.

In this article, we aim to explore how references to school educational projects are positioned in discourses and practices of school choice amongst Catalan families. More specifically, our objective is to investigate the extent to which a concern for educational projects is enacted as a motive behind school choice decisions and how its problematisation is linked to other choice factors – particularly to school social composition. In this sense, the case of Catalonia (more specifically, of its capital, Barcelona) provides us with an appropriate context of analysis in the sense that the opening of the margins of school choice and school diversification are still in incipient stages of development, and discourses on the importance of educational projects have only recently emerged with any vigour.

In short, this article aims to contribute to the existing critical literature on quasi-markets in education, focusing on the ways in which a specific policy operation – school educational projects – is enacted by families when choosing a school in a policy regime – Catalonia – where marketisation is taking its first firm steps in education.

Quasi-markets, school autonomy and the role of parents

This is a study of policy enactments, in which the term ‘enactment’ ‘refers to an understanding that policies are interpreted and “translated” by diverse policy actors in the school environment’, and in which we acknowledge that ‘putting policies into practice is a creative, sophisticated and complex process that is always also located

in a particular context and place' (Braun, Maguire, and Ball 2010, 549). More specifically, we are interested in how parents interpret and recontextualise the policy imperatives associated with school educational projects in the framework of the multiple requirements and expectations involved in school choice processes. Moreover, we are interested in the extent to which enacting patterns vary across distinct groups of families.

The premise that parents choose (or should choose) a school for their children on the basis of its educational or pedagogical project is linked to the notion of a 'neoliberal subject' that Nikolas Rose has developed at a more general level. In this framework, neoliberal policies operate by assigning individuals with an 'actively responsible self' that are based on the exercise of 'choice, personal responsibility, control over one's own fate, self-promotion and self-government' (Rose 1996a, 335). Such policies generate a new 'subject of government', based on the idea of the citizen-consumer who should individually assume the management of risks, act as an active agent and exercise informed and autonomous responsibility (Rose 1996b). Certainly, these arguments can be translated to the field of school choice, where parents are supposed to assume the responsibility of the educational destiny of their children through their school choices. Likewise, the rhetoric of legitimisation of school autonomy and differentiation considers that families act in a rational way, weighing up the different pedagogical options through which schools position themselves in the market. In this way, this rhetoric acritically shares the basic assumptions of rational choice theories, according to which individuals take cost-effective decisions to achieve specific goals, according to certain preferences, in the framework of certain objective restrictions. More specifically, it is understood that in the field of school choice (in the stages of universal compulsory education), the main space of differentiation between individuals is found in the sphere of pedagogical preferences.

However, there is empirical evidence that the definition and identification of more or less 'desirable' schools by families is a somewhat more complex process, which does not rely exclusively on pedagogical criteria and which, in any case, is found to be marked by profound social inequalities.

Firstly, studies concluding that a concern for school social composition is a more powerful criterion of choice than pedagogical considerations are particularly noteworthy (Ball 2003; van Zanten 2006). Parents – mainly those of the middle class – are found to be concerned with how school composition can condition their children's educational opportunities. More specifically, middle-class families' references to the supposedly 'good' or 'bad' quality of schools are based on the operation of judgements and strategies that tend towards their social closure in certain 'circuits of schooling' (Ball, Bowe, and Gewirtz 1995; Ball 2003). Schools are seen as the 'students that attend the school', and the characteristics of these students (and their families) end up being the main criteria used to evaluate the quality of the schools and to guide decisions when choosing one (van Zanten 2006).

Secondly, it has been demonstrated that the field of school choice not only articulates competitive strategies, but it does so based on the construction of unequal social positions. In a recent study, Alegre and Benito (2012) apply the Bourdieuian metaphor of the playing field to interpret the meanings, structure and processes of school choice in Barcelona. By doing so, they make clear how the agents' perceptions and knowledge of the field of school choice (their point of view *on* the field) depend on the position they occupy in it (position *in* the field), and

that their practical strategies are conditioned by the basic capitals (economic, cultural and social) that open up or close off the possibility of achieveing the various positions. More specifically, it is the (unequal) possession of these capitals that conditions parents' general chances of accessing high or low quality information based on more or less direct and reliable knowledge, and that defines their cognitive capacities to maximise the handling and exploitation of the information obtained.

Thus, on the one hand, we will examine how family enactments of the policy driving school educational projects relate to and balance with the way they problematise other criteria guiding school choice; while on the other hand, we will explore the extent to which such relationships and balances differ across distinct groups of families.

School educational projects and the exercising of school autonomy in Catalonia

School autonomy has become the cornerstone of the progression towards an education quasi-market in Catalonia during the past decade. Understood as autonomy in curricular, organisational, and human and material resource management terms, this move towards endogenous privatisation of the education system culminated in the passing of the Catalan Education Act (Departament d'Educació 2009) and, more specifically, the School Autonomy Decree (Departament d'Educació 2010). These policy statements recognise and give normative value to the drive for the establishment of school educational projects – policy documents with which schools had already been equipping themselves in the previous years.

It is understood that an educational project should include, amongst other things, a school's educational objectives, missions and orientations, the organisation of its pedagogical mechanisms, its organisational structure and its instructional resources. In any case, schools are subject to the general and specific curricular contents that regional and central governments establish for each of the educational stages. Through their educational projects schools can, at most, decide on the distribution of curricular subjects across stages and courses, and on student grouping strategies. In other words, through their educational projects, schools can orient their specificities in relation to *how* they teach, rather than *what* they teach. Regardless, in the preparation of their projects, schools must 'value the social and cultural characteristics of the school context and the educational needs of their students' (Departament d'Educació 2009). School educational projects are detailed in publically accessible documents that schools disseminate on their respective websites as well as during open days. In formal terms, these projects can be very diverse, ranging from 15 to 100 pages. While they all include sections such as those mentioned above, some documents include descriptive information about the school environment, a brief report on the school's history, or even a detailed account of specific activities/programmes they have been developing over time. Other documents are simply standardised outlines of a school's pedagogical values, resources and basic organisation. No school rankings or league tables based on school achievement results are made available to families.

This policy of differentiation in the school supply (both public and private)[1] that is promoted through the move towards school autonomy and through educational projects is presented as a silver bullet for raising educational efficiency and standards. On the one hand, such policy is considered to offer schools the opportunity

to act more effectively in terms of the specificity of their social and academic milieu, while also introducing dynamics of competition between schools that can improve the general efficiency of the system. On the other hand, it facilitates school choice to the extent that families have a more diversified school supply at their disposal and, through the promotion of educational projects, they are in more of an informed market position in terms of the educational orientations of schools. Finally, this policy is expected to consolidate the commitment between parents and the chosen school. As established by the Decree, in applying its educational project, each school should define a 'letter of commitment to education' – that is, a contract that must be signed by the school's head teacher and by the families that enrol their children in it, and that encompasses the commitments that each party assumes. Amongst the commitments that parents must assume, we find 'the acceptance of the school's educational project' (Departament d'Educació 2010). All in all, educational projects are not only internal planning documents for schools, but also 'branding documents' presented to families, who should evaluate what is on offer, choose a specific educational project and commit themselves to its principles in writing.

In parallel, with regard to school assignment policies, many Catalan municipalities have been reforming the application of the proximity criterion through the modification of school zonification. In Catalonia, formally, families have the freedom to choose any school they wish (in their municipality or beyond), although in the case of oversubscription, certain general criteria for prioritising applications are applied (legally, no school – whether public or subsidised private – has any margin of autonomy to select its pupils).[2] Amongst these criteria proximity is prominent, as one that affects all families. In practice, it can be stated that the majority of parents limit their possible choices to schools at which they obtain a maximum score for proximity (Benito and González 2007; Alegre et al. 2010; Bonal 2012). In this sense, the expansion of the proximity radius assigned to each school (public or subsidised private) represents a decisive policy of widening the margin of choice. In Barcelona in 2007, a system of proximity management was implemented, which aimed to avoid the division of the city into school catchment areas. It assigned each family the maximum score for proximity at the schools closest to their homes, amongst which there had to be a minimum of three public and three subsidised private schools. In 2012, this minimum has been increased to six public and six subsidised private schools and, moreover, all of the schools located in the educational zone in which a family resides must be included. With this modification, the average number of schools in proximity for each family has increased from 7.9 to 16.7 schools (CEB 2012).

The research study

This article reports on a research study that explored family experiences and strategies of school choice in the city of Barcelona. The study was conducted between 2008 and 2009 and had a strong focus on assessing knowledge and practical social inequalities arising in the playing field of school choice. This research employed both quantitative and qualitative methods. Firstly, a questionnaire was administered to parents just after the completion of the pre-enrolment process for the 2008–2009 school year, and responses were gathered from a representative sample of families with children at the age of commencing pre-primary education (three years of age). The questionnaire was designed to address four key areas: (1) level of importance

given to school choice; (2) criteria for choosing and ruling out schools; (3) knowledge of the playing field and use of information channels; and (4) final choice made. The survey sample ($N = 3245$; 23% of all families with children of three years of age in Barcelona) includes parents from a significant range of socioeconomic profiles and residence districts in the city. Secondly, 60 in-depth interviews were carried out with families of different profiles with children ready to commence pre-primary education. The selection of parents to be interviewed was designed to achieve diversity with regard to family education level, immigrant background and neighbourhood of residence. Interviews lasted for 60–90 min and most were carried out in school settings (nurseries and primary schools), while a few exceptions were conducted in interviewees' homes. Most of our respondents were mothers, which is common in research on 'parents'.

This article draws primarily on the qualitative material extracted from the interviews, and focuses on the family discourses that enact the policy of school educational projects. To complement these references, we will provide contextual information based on the responses given by parents to two of the questions included in the survey: first, 'Which criteria have you considered as priorities when choosing a school?', which included a list of 18 possible answers, from which the surveyed families had to prioritise a maximum of three; second, 'From the following school profiles, are there any that you would not be willing to take your child to?', which included a list of 11 possible answers, from which a maximum of three could be selected. The first question relates to criteria in making positive decisions (characteristics of schools to be selected), whereas the second relates to decisions on ruling out school options (characteristics of schools not to be selected). Both qualitative and quantitative approaches pay particular attention to the scope of social inequalities in the distribution of family concerns and responses to these issues. More specifically, we look here at families' education levels, using the categories of completed compulsory education, post-compulsory education and university education.[3]

The research project on which this article is based was carried out just before the School Autonomy Decree was passed. As far as the policy of school educational projects is concerned, however, the Decree did no more than provide a normative framework and define the aforementioned letter of commitment. In fact, the policy driving school autonomy and educational projects emerged at the beginning of the 2000s, and even at the time this article was produced, letters of commitment were still rarely utilised by schools. Thus, the temporal mismatch between the Decree approval and the time at which the study was conducted do not seem to represent a real drawback to our research interests. In other words, it is reasonable to expect to find parents 'affected' by the political push for school autonomy and educational projects at the time they were surveyed and interviewed.

(Unequal) considerations of school educational projects

As shown in Table 1, educational projects are situated as the second most relevant criterion for school choice (selected by 44% of parents), after proximity. If we assume that the prioritisation of proximity is more a consequence of the system of school assignment than a free preference for an intrinsic value, we can then consider educational projects as the most valued selection criterion for the surveyed families.

Table 1. Priority criteria of school choice, according to family educational capital (%).

	Family educational capital			
Criteria of school choice	Compulsory education	Post-compulsory education	University-educated	Total
Proximity to home or work	61.3	67.0	58.8	62.4
School educational project	31.4	42.3	57.5	44.3
Same school as brother/sister	29.4	27.5	28.7	28.5
Equipment and facilities	25.5	25.8	23.7	25.0
Secondary education provided in the same school	21.1	26.0	20.1	22.4
Public school	23.5	20.2	19.7	21.1
Children of friends or relative go there	18.1	12.9	8.4	12.9
Profile of the families whose children go there	6.4	12.4	15.7	11.7
Subsidised private school	12.3	11.5	10.5	11.4
Level of discipline	8.8	12.1	9.1	10.1
Teaching staff	10.8	8.4	9.8	9.6
High level of academic results	6.9	7.7	12.4	9.1
Free tuition	13.7	9.1	3.8	8.7
School that we studied at	5.4	6.3	8.5	6.8
Foreign language as the language of instruction	4.9	3.4	5.8	4.7
Religious denomination (Catholic)	1.5	2.5	6.9	3.7
School is same place where the child went to nursery	2.9	2.9	2.7	2.8
Independent private school	0.5	0.3	0.3	0.4

Note: Each family was allowed to choose a maximum of three selection factors. Given that this is a multiple choice question, each box refers to the percentage of families that selected the factor in question. In the first three columns, the percentages refer to each educational profile category, while the last column gives the percentage of the whole sample. The factors have been ordered according to the figures in this last column.

Likewise, in the interviews, a significant number of families highlight, in the first instance, the impact that the educational dimension of schools had on their choice. In this sense, references to educational projects as a main factor behind school choice are recurrent, mainly in the discourses of highly qualified parents:

> The main thing that we check is whether the school has an educational project that we like in terms of how they get children to acquire knowledge. (…) Basically we try to analyse the schools using the information that we have, and we look for the communication of a certain image of a quality educational project in terms of education, the education level that they give to the children, their values, their way of doing things. For us, what matters much more is the school's project itself, because that is what facilitates integration, rather than the socioeconomic level of the people that go there, or their geographic origin. (…) The educational project lets you see whether they offer a comprehensive education in the sense of transmitting values, coexistence, rules … and competencies. (Mrs Puig, university education)

Less qualified families show little familiarity with this notion, and on being questioned about certain characteristics of educational projects, many express an unawareness of the existence of relevant differences between schools – particularly, between public schools. They sometimes state that they suppose they will be informed about the school characteristics once the school year starts. We

therefore record references such as: 'The educational project … what is that?' (Mrs Rodríguez, compulsory education); 'We're not going to the meeting, where you get to find out about the school. All of their projects are more or less the same, aren't they?' (Mrs López, compulsory education); and

> If they accept my daughter, then I will go to talk to the head teacher and they'll explain everything to me, and they'll tell me about the school and what system they have for educating and what they do, (…) and if I don't like it I'll have to put up with it, because the important thing is that it's close to home. (Mrs Gómez, compulsory education)[4]

The data in Table 1 also show the significance of these differences according to family education capital: while 57.5% of university-educated parents selected educational projects as the main factor behind their choice, this percentage was 42.3% amongst families with post-compulsory studies, and 31.4% amongst families with compulsory education or less. These differences are even more significant when we consider the weight of the various factors behind the ruling out of schools (Table 2): 72.8% of university-educated parents use (undesirable) educational projects as a reason to rule out a school, while only 44.4% of parents with compulsory education or less do so.

Likewise, the odds ratios[5] shown in Tables 3 and 4 place the educational project as the choice factor that reflects greater differences in terms of family educational capital: less qualified families are 2.5 times less likely than university-educated families to have selected it as a criterion behind their positive choice (Table 3) and 2.7 times less likely to select it as a reason to rule out a school (Table 4).

Table 2. Profiles of schools in which families would not be willing to enrol children, according to family educational capital (%).

	Family educational capital			
School profiles	Compulsory education	Post-compulsory education	University-educated	Total
With low quality teachers	54.6	61.0	65.9	60.8
With an educational project that we do not like	44.4	57.2	72.8	58.8
With a student profile that we do not like	44.4	54.1	54.0	51.1
Located very far from home	56.1	52.5	40.9	49.5
Religious	17.6	19.3	21.7	19.6
With a rigid disciplinary regime	22.0	15.4	14.2	16.9
With a lenient disciplinary regime	14.6	12.4	16.8	14.6
Independent private school	11.7	10.3	9.0	10.3
Public school	8.8	7.6	7.4	7.9
Subsidised private school	5.9	2.5	1.1	3.0
Secular	2.9	1.8	3.7	2.8

Note: Each family could choose a maximum of three school profiles. Given that this is a multiple choice question, each box refers to the percentage of families that selected the school profile in question. In the first three columns, the percentages refer to each educational profile category, while the last column gives the percentage of the whole sample. The school profiles have been ordered according to the figures in this last column.

Table 3. Binomial logit regressions for priority criteria of school choice.

		Criteria of school choice									
Family educational capital		Proximity to home or work	School educational project	Same school as brother/ sister	Equipment and facilities	Secondary education provided in the same school	Public school	Children of friends or relative go there	Profile of the families whose children go there	Subsidised private school	Level of discipline
Compulsory education	Exp(*B*)	1.105***	0.401***	1.238***	1.244***	1.108***	1.015	1.828***	0.382***	1.424***	0.888***
	(SE)	(0.009)	(0.009)	(0.009)	(0.01)	(0.01)	(0.01)	(0.013)	(0.014)	(0.013)	(0.015)
Post-compulsory education	Exp(*B*)	1.324***	0.637***	1.05***	1.165***	1.38***	0.986	1.341***	0.773***	1.277***	1.322***
	(SE)	(1.008)	(0.008)	(0.009)	(0.009)	(0.009)	(0.01)	(0.013)	(0.011)	(0.012)	(0.013)
University-educated	–	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.

Notes: Regressions have been calculated by placing each criterion of school choice as a dependent variable, with two categories: 'Selected/Not selected'. The odds ratios refer to the probability of selecting each factor. Criteria of schools choice that were selected by less than 10% of families of the sample have been excluded from the regression, due to the limited number of cases. The reference category of the independent variable (family educational capital) is 'university-educated'. The data have been controlled for the following independent variables: parents' immigrant status, educational profile of the neighbourhood of residence, rate of immigrant population in the neighbourhood of residence and rate of private schools in the neighbourhood of reference.
$^{***}p \leqslant 0$ .001, $^{**}p \leqslant 0.01$, $^{*}p \leqslant 0.05$.

Table 4. Binomial logit regressions for profiles of schools in which families would not be willing to enrol children.

		School profiles							
Family educational capital		With low quality teachers	With an educational project that we do not like	With a student profile that we do not like	Located very far from home	Religious	With a rigid disciplinary regime	With a lenient disciplinary regime	Independent private school
Compulsory education	Exp(*B*)	0.645***	0.388***	0.774***	1.775***	0.685***	1.504***	0.909***	1.319***
	(SE)	(0.008)	(0.009)	(0.008)	(0.008)	(0.01)	(0.011)	(0.012)	(0.014)
Post-compulsory education	Exp(*B*)	0.876***	0.611***	1.087***	1.503***	0.808***	1.033***	0.762***	1.166***
	(SE)	(0.008)	(0.008)	(0.009)	(0.008)	(0.01)	(0.011)	(0.011)	(0.013)
University-educated	–	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.	Ref.

Notes: Regressions have been calculated by placing each school profile as a dependent variable, with two categories: 'Selected/Not selected'. The odds ratios refer to the probability of selecting each school profile. School profiles that were selected by less than 10% of families of the sample have been excluded from the regression, due to the limited number of cases. The reference category of the independent variable (family educational capital) is 'university-educated'. The data have been controlled for the following independent variables: parents' immigrant status, educational profile of the neighbourhood of residence, rate of immigrant population in the neighbourhood of residence and rate of private schools in the neighbourhood of reference.
***$p \leqslant 0$ .001, **$p \leqslant 0.01$, *$p \leqslant 0.05$.

An exercise of 'responsibility'

Many of the parents interviewed state that a consideration of educational projects must form the basis of the decision-making involved in school choice. Moreover, these parents perceive a concern for educational projects as one facet of responsible parenting. For these parents, educational projects represent an element that every 'good father' and every 'good mother' should assess during the search for a 'good school' for their children. To a great extent, the association that these parents make – between assessing educational projects and good parenting – draws upon and (re) produces the public discourse that relates a responsible school choice with responsible parenting.[6]

Thus, taking an interest in educational projects seems to be associated with good practices within the group of families that consider themselves the most concerned with and involved in the education of their children. Seen the other way around, choosing a school without finding out about or evaluating the educational project being offered becomes associated with an irresponsible attitude:

> In our house we give maximum importance [to educational projects]. This is a matter that worries me a lot, the question of education. I suppose that like all parents, you are obsessed with finding the best, maybe thinking about what you – for reasons like work, time, and thousands of other things – cannot give. And as school takes up so many hours, you look for the best one (…) It's great when their ideology corresponds to our way of thinking, our way of doing things, our environment. And for me it's not a practical question of a school being close to home, but it's about it being the best. (Mr Palau, university education)

In particular, parents problematise the lines of affinity between the way they educate at home and the way the school educates – that is, between the 'family socialisation styles' (Kellerhals and Montandon 1991) and the parameters of the educational codes of the schools in question – with particular emphasis on the fit between the expressive values of the two socialisation spaces:

> I believe that a part of education should be transmitted at home, but you try to find a school that shares the values that you teach them at home, where they are not different. It wouldn't make sense if I was Muslim and I took my child to a Catholic school, for example. The school won't do everything, but we think it's important to send our child to a school that feels as similar as possible to home. So that the way of doing things or the values that are communicated, the ways of behaving, complement each other; so that they are not contradictory, so that they are similar to those that we try to communicate (…) Families should have the option to choose the school that is closest to the values that they share with and try to teach to their child. (Mrs Puig, university education)

The discourse on educational projects has often been accompanied by a critical discourse on the weight of proximity in school assignment systems. The prominence of the proximity criterion is interpreted as an illegitimate limitation on the exercise of parental responsibilities: parents should be able to explore the various educational models that are offered to them without restrictions. As we have already indicated, this enacting pattern is observed amongst many of the families with high levels of education. Conversely, in line with the results obtained in other studies (Ball, Bowe, and Gewirtz 1996; Rambla 2003; Poupeau, François, and Couratier

2007), proximity appears to be the most important factor behind school choice amongst less qualified parents.[7]

… and yet: substantive ignorance

Paradoxically, the majority of families interviewed tend to demonstrate limited knowledge of the concrete content of the educational projects of the schools they plan to select from. As we shall see below, this ignorance can be due to various reasons, some of which are essentially interconnected: a relative lack of interest in the specific characteristics of the projects, an underestimation of the informative value of declarations made in official project documents, difficulties in understanding the meaning and possible implications of these declarations, etc. As a consequence, in most cases, even regardless of the importance given to this factor, parents talk about school educational projects without referring to the contents of the documents in which such projects are theoretically formalised.

Highly qualified families describe generic features

Even the families with the highest levels of education refer to educational projects with a significant level of indeterminacy, describing generic and imprecise features of the educational orientation of the schools. They generally make sporadic references to schools' values or the level of discipline implemented, relating both aspects to the public or private status of the schools. One of the most commonly mentioned generic values is the religious orientation of subsidised private schools. In some cases, an explicit desire for the child to receive a religious (Catholic) education is expressed, but in others parents opt for Catholic schools because of their association with a more rigid and conservative educational model than public schools, which tend to be viewed as more flexible and progressive:

> I wanted a school where religion doesn't predominate, because I'm an atheist. This school is religious, but we liked it as a school. It is a bit of a dilemma, but we see it's a serious school, that they are watching the children, and I thought, well, it's no big deal, I think … The decision was based on the fact that it's a big school that's been around for many years, that they knew what they were doing, with discipline (…) The public school has a set of values that I think are brilliant, but they are missing some discipline there, as I think it improves the academic level of the children. (Mrs Soler, university education)

The more rigid discipline that is associated with private schools – both religious and secular – is valued due to its association with attitudinal control (which generates a perception of children being better protected) as well as strictness and academic seriousness. In short, it is perceived that private schools institutionalise a more structured and ordered schooling, within which the teaching body (and not the students) has control over the learning progression.

Conversely, some families avoid the higher levels of discipline. Usually, these parents associate the pedagogical models employed by private schools with traditional and, in some cases, outdated methods that establish a hierarchy between teacher and student from times past. Some of these families perceive the more disciplinary models as less efficient, as they consider them to revolve more

around the imposition of study than on stimulating and motivating students. They tend to associate public school with a more inclusive and progressive pedagogical model:

> I think that public education is more oriented towards making people more independent and autonomous than private education, which watches over the children more, and although they reach higher levels of content, what they don't learn is how to obtain that knowledge by themselves (…) And it's more about how teachers can escape a bit maybe from what's been done for a long time in acquiring knowledge more than skills, of giving the children competencies to be able to develop themselves not only at school but also outside the school and that the knowledge is not closed in the classroom, but it allows them to relate to each other. (Mrs Ferrer, university education)

Likewise, many university parents make a political choice by opting for the public school model. In this sense, going beyond pedagogical values, opting for a public school is perceived as an exercise of civic responsibility in favour of social cohesion and cultural diversity: 'We were sure that we wanted a public school (…) we are a bit pro-social and we use social security, we use public schools … Let's say that we believe in public services', noted Mr Grau (university education).

It goes without saying that this commitment is conditional on the local public schools not being too ghettoised. Mr Grau kept on saying:

> Another thing is a school that has problems with coexistence. It doesn't only depend on the type of students that go there. It also depends on the administration that the school has. Dealing with different people requires more resources. And more resources are not always dedicated to that. (Mr Grau, university education)

We see, therefore, how the evaluation of the educational models of public and subsidised private schools is based less on informed knowledge of the concrete characteristics of their various educational projects than on levels of affinity with a more progressive or more conservative educational framework, where value homologies associated with parameters of an ideological character or social status emerge.

Less qualified families experience hierarchical distance

However, the least educated families express the greatest difficulties when it comes to decodifying the declarations usually made in educational projects:

> And school X … it doesn't matter to me, it's just the distance that annoys me. Why do they teach like this or like that … what do we know about it? Well, if they hit the children, of course, that's something else, but if they teach one way or another I'm not qualified to say anything about that. (Mrs Pérez, compulsory education)

Indeed, it is not easy to effectively process the ways in which schools identify their educational approaches – as an inclusive school, a green school, a school focused on excellence, on competences, on intercultural education, on cooperative learning and so forth. Furthermore, some of these less qualified families express a distant, almost hierarchical respect towards educational institutions in general, and

more specifically towards the schools from which they can choose. Such a disposition is based on attitudes of dissociation, even estrangement, which identify the schooling process as something that goes beyond the family's legitimate control; education is a field in which they do not have the necessary competence to intervene or even have an opinion.

Behind school educational projects: a matter of 'quality' and concern for school composition

The way in which parents enact the policy imperatives associated with school educational projects cannot be separated from their concern for the 'quality' of schools, and in particular, for the academic opportunities that these schools offer their children. Thus, families usually try to look for indicators of a school's level of quality in the many different areas of its characterisation, of which the educational project is one. Such a concern is again mainly identified amongst parents with higher education levels and, as anticipated above, it is not necessarily linked to a detailed knowledge of the specific contents of educational projects.

This interest in quality can be split into two distinct types. On the one hand, we identify a group of families that look for high quality schools that will maximise their children's academic potential. Although references to the expressive aspect of schools' educational and pedagogical models are not absent from these parents' discourses, above all they seek an educational project with added value in the instrumental sense. The identification of such projects is often facilitated by the brand of quality with which some schools are perceived in the collective imaginary. Such perceptions arise from distinct measurements. For instance, some parents refer to the school rate of students moving on to higher education.[8] Similarly, these families make reference to general aspects of educational projects that act as indicators of schools' excellence, such as, for example, intensive study of a foreign language from an early age:

> Everyone you ask will answer that this school is academically good and that it's of a very high level. You have to get this information by asking within the schools … and sometimes you see it through the languages. If you can see more or less the level of language teaching, you can see the direction they are going in. In this school they study two languages on top of Catalan and Spanish, and they already start introducing these foreign languages when the children are small. (Mrs Sans, university education)

On the other hand, a concern for school quality can also be expressed in terms of avoiding 'circuits of school failure', rather than in terms of aspiring to place children in 'circuits of academic excellence'. These parents look for a school whose educational project offers guarantees of an appropriate academic progression for the student, mainly in the public sector. This concern for the instrumental dimension of education does not overshadow the obligation that these families feel to consider the importance of the expressive values of the school.

Whatever the case, it is amongst these two groups of parents – both of which are highly qualified and greatly concerned with the quality of schools – that the difference between what is sought in educational projects (indicators of quality and expressive fit) and what they actually find in them is most clearly demonstrated. From their point of view, educational projects are, at the end of the day, declarative

documents full of abstract principles and values, clichés, standardised objectives and repetitive statements, even if with different nuances (pedagogical and/or organisational), the implications of which are difficult to define. As a result, most of these parents end up relativising the informative value of educational projects in terms of their instrumental contents as well as their expressive position. It therefore becomes necessary to make inquiries beyond the official document. In this sense, it is during moments of direct contact with schools (opening doors days and interviews with teachers) that families can corroborate the level of confidence conveyed by the teaching staff and their schooling style. In parallel, these parents turn to all of their friends and acquaintances that can provide first-hand information about the running of the various schools under consideration:

> It is difficult, but you ask. Because you always know someone who has a child at that school, and you hear people talk about the school. Afterwards, the way the opening doors events are organised says a lot, because it's similar to how it organises the classes and they show you that they want to work with your children, and how. I think that the opening doors days are important so you can reassert what they told you or what they didn't tell you. (…) It was a feeling. The head teacher received us very well. We liked what she explained to us, how she explained it, what they offered us … a combination of everything. They knew how to reach people and if they know how to do that with adults, they'll also know how to do it with children. (Mr Valls, university education)

In the same vein, these same two groups of families perceive the social composition of schools as a principal indicator of school quality – that is, of the opportunities for academic success that they offer. Throughout the interviews, and despite the fact that interest in educational projects was the starting point of most of the discourses articulated by the most qualified families, motivations relating to schools' social characteristics are also markedly observable. On more than a few occasions, concerns for social composition are placed over and above pedagogical considerations. In such cases, two arguments emerge that lead parents to consider the significant impact that social composition can have on a school's learning processes in general, and on the children's academic results, in particular.

Firstly, the supposed negative effect of the presence of foreign students in a school is normally referred to with more ease than the supposed negative effect of the presence of socially disadvantaged students. The problem is seen to be the foreign students themselves, a significant number of whom experience learning deficits (when not experiencing attitudinal deficits) and whose presence in the classroom slows the learning progression of the rest of the students. It is important to underline that this argument is not only sustained by the most qualified families, but also by less qualified, native families.

> I feel bad, but I didn't like it not because of the school but because of the rate of immigration … If there are lots of people that are different to you, the level of the class goes down because they have to explain to them things that your child already knows and, therefore, if everyone knows them the level will be higher. So I prefer that they are at the same level as my child, that they don't have to lower it to be at the level of others (…) I took him to a place where there is diversity but within the same circle. This doesn't mean that he doesn't understand other cultures, other ways of doing things, but it's one thing to understand and another to have to adapt to them. (Mrs Roca, university education)

Secondly, choice strategies that aim to avoid sectors of the native population with a low socioeconomic status tend to be justified on the basis of the characteristics of the families themselves. What generates distrust are the dispositions of the less capitalised parents towards the school institution – dispositions that are perceived by more qualified parents to be markedly different to their own and that are suspected of having the potential to disrupt the effective running of the school and, therefore, their children's educational opportunities. We do not overlook the fact that this type of reasoning relies on a class-attributive judgement, where differences in social class are reinterpreted according to questions of attitudinal order: there are parents that care more than others about the education of their children.

> The type of families is important. Above all because there are families that worry more about their children … that also worry about them doing well at school, that they take part in activities, that they do their homework, and they scold them if they behave badly. It is important for families to be involved in the education of their children. I think that there is a big difference when a parent worries about their child and when they don't, and this can slow down the rhythm of the class. (…) In private school, the fact that you pay extra for tuition makes you think that these are people that care about education. I don't mean that those that go to public school do not, but it gives you the feeling that in public school there is a bit more of a mixture. (Mrs Esteve, university education)

In this sense, we see that the characteristics of school composition acquire more relevance as a factor leading to the ruling out of a school than as a factor leading to the positive selection of a school. As shown in Table 1, school composition is eighth in the list of positive choice criteria, selected by just 11.7% of families. In contrast, it lists third amongst the factors behind the rejection of a school (Table 2), selected by 51.1% of families. These data therefore corroborate the idea that school composition predominantly operates as a filtering criterion. Once a shortlist of possible schools has been selected, a concern for educational projects comes to occupy a predominant position, as a positive choice criterion.

Furthermore, social composition appears to be a particularly significant motivation for choosing a school amongst parents with higher levels of educational capital (Ball 2003; van Zanten 2006; Vowden 2012). More specifically, as a factor leading to the positive selection of a school (Table 1), it was selected by 15.7% of university-educated families, 12.4% of families with post-compulsory education and 6.4% of families with compulsory education or less. As a factor leading to the rejection of a school (Table 2), (undesirable) social composition was chosen by 54% of university-educated parents, 54.1% of parents with post-compulsory education and 44.4% of parents with compulsory education or less. The regression analyses indicate that families with compulsory education are 2.6 times less likely than university-educated families to consider social composition as one of the main positive choice factors (Table 3) and 1.3 less likely to use it as a factor in the ruling out of a school (Table 4).

The search for alternative education models: a minority option

A minority of parents take their desire for affinity between family and school socialisation styles to the extreme of compiling all the information possible on

the parameters of schools' educational projects. These are families that mainly look for a destandardised education model, a model of pedagogical action far removed from more conventional teaching practices. Usually, these families have high cultural capital and are specifically knowledgeable about models of child socialisation/schooling, either because they work in the field of education – or they know people who do – or because since the birth of their children (and even before), they have taken an interest in learning about alternative models of socialisation.

Their main concern is not mapped to the instrumental sphere but to the more expressive domain. They look for an educational context that favours the development of their child in areas to which conventional teaching does not dedicate enough attention, such as, for example, the sociability of the child, his/her level of autonomy, or his/her emotional development:

> It's about evaluating the educational project, not so much for its teaching, or the value of the applied knowledge, but to see that it is inclusive and that education is understood as a process for adapting children to the social environment that they will live with, and give them the tools not only to learn, but also to know how to relate, so that they adopt a series of certain values. (Mrs Pla, university education)

The search for these expressive models is accompanied by a certain discourse that criticises a standardised education system that does not give sufficient prominence to the child and that adapts very little to his/her individuality. These parents consider that pre-school and primary education, beyond being a space for the assimilation of basic educational content, should also be a moment during which the student can experience and develop his/her personality. Conventional school is seen to already generate logics of academic competency amongst students from when they are very young, when the priority at this age should be the comprehensive development of the children and their emotional wellbeing.

Neither the social profiles of the school students nor those of their families are positioned as priority factors, at least in pre-school and primary education. Moreover, these parents even occasionally stress the positive value of contact with students of different origins and backgrounds to their own. For these families, the social mix, rather than being an obstacle, is perceived as an educational value in itself:

> What I like is that my children go to school with all types of children – that is, not only middle class children. Upper, lower, it's all the same. I like that they go to school with all types … in life they will come into contact with all types of people and they will have to mix with everyone. I cannot give them that at home, you see? I cannot provide that diversity at home, because at home they only mix with us, with their cousins … but we're all cast in the same mould, right? (Mr Vila, university education)

It is important to underline that these enactments are developed by families living in middle or upper class neighbourhoods and that they are generally referring to school contexts in which social and cultural diversity is quite limited. In fact, destandardised pedagogical orientations tend to be restricted to a tiny minority of schools, which tend to attract mainly families with higher educational capital, thereby configuring highly capitalised social compositions.

Discussion: school educational projects as a euphemism?

To summarise, we have observed that many discourses, and particularly those of the most qualified parents, place a concern for educational projects at the very centre of school choice, primarily in the final moment of decision-making (for positive selections). Thus, the policy imperative of being interested in schools' educational values, visions, orientations and objectives is enacted as an obligation that comes to form part of the responsibilities that families assign to the exercise of good parenting. Lastly, families appear to concern themselves with guaranteeing lines of continuity between styles of family socialisation and school education, as well as optimal spaces for academic development.

However, as we have seen, few parents are able to describe the concrete characteristics of the educational projects of the schools from which they will choose. With the exception of a minority of parents that study the contents of the various educational projects in depth while seeking non-conventional teaching models, the vast majority of families interviewed – amongst those that state they take educational projects into consideration – can make little more than unspecific references to the general values and orientations ascribed to one project or another (religiosity, Catalanism, discipline, strictness, etc.), often establishing vague associations with the public or private status of the schools. Such ambiguities and estrangements are particularly evident amongst less qualified parents.

Based on these findings, some might conclude that if school educational projects do not acquire greater significance in practice as a criterion of choice it is due to the imperfection of a school choice system – the Catalan one – which (still) does not put parents in an informed market position. On the one hand, if some families – and particularly those that are less qualified – still find themselves at the periphery of this spread either because of their disposition or because of their lack of knowledge, it would appear worthwhile to establish empowerment mechanisms to raise their awareness and to prepare them to participate in the game. Policy operations such as the contract of educational commitment agreed upon between parents and schools should be useful for both purposes. On the other hand, if some educational projects are still defined in an opaque or excessively standardised way, it would then be useful to support schools in the process of defining their educational specificity. From there, some might interpret the publication of school rankings as the natural next step towards the clarification and increased transparency of the system. From this point of view, one could suppose that the neoliberal ideal of an autonomous, responsible and rational (Rose 1996a, 1996b) consumer subject is perfectly achievable and extensible in the field of school choice. Nevertheless, the empirical results of this study raise serious doubts in this sense. We will discuss two of these.

Firstly, we should insist in the scope of social inequalities in the generation of positional advantages and disadvantages in the field of school choice. As Alegre and Benito (2012) point out, and maintaining a focus on educational projects, parents with greater cultural capital are better able to efficiently comprehend and utilise the multiple information channels presented to them, those with a strong formal component (meetings or interviews with school leadership), and those requiring the handling of 'cold' knowledge (printed documentation and online content). As a result, these more highly capitalised families acquire more privileged knowledge of the characteristics and actual implications of educational projects. Furthermore, one

could expect that, in a competitive playing field, schools define their educational projects strategically. Indeed, some authors have studied the competence dynamics that develop in local contexts where schools have wide margins of autonomy in the definition of their own educational projects (Dupriez and Cornet 2005; Bunar 2011). In these competitive contexts, it is understood that each school defines a specific educational project, a particular institutional image that is attractive to a certain sector of actual and potential users, while not so attractive to others. The concept of an 'educational niche' defines this phenomenon well, since it simultaneously refers to a strategic logic of positioning in a market segment (positional dimension) and to the construction of a school identity or culture (cultural dimension) (Dupriez and Cornet 2005). From this perspective, certain families look for certain schools just as certain schools looks for certain families. Such reciprocal adaptation also underlies the production and reproduction of certain processes of school segregation.

Secondly, the qualitative analysis carried out here suggests that the relevance of social composition in parental choices transcends a concern for educational projects. The characteristics of school composition offer parents an indicator that acts as a proxy variable for the quality of schools – that is, for the opportunities for academic success that they provide. Moreover, it could be affirmed that in the case of some families, a concern for social composition transcends even their interest in the quality of schools. Indeed, school choice is, above all, a space for socially positioning one's offspring.

To a great extent, parents' social expectations are channelled through academic expectations (e.g. competencies and credentials provided by the school system), although not uniquely. In other words, in the struggle for social reproduction, school choices are not only based on the search for a school environment that maximises the academic potential of the child. As we have seen, a concern for the social environment of schools operates as a filter (for ruling out schools), through which parents construct a shortlist where the preselected options all correspond to either their own social condition, or the one they aspire to:

> You look for something you think … I don't know, with people like you, where you know a neighbour who also goes there, with people that you might know. A place that's a bit … well, like your environment, you know? Where they're not really different, so that he can make friends with the children. Where they move in the same contexts and they like to do the same things (…) If I go to an upper class neighbourhood and in the school they're all 'snobs', I wouldn't take him there because they're not like me. If I go to a lower class neighbourhood I wouldn't take him there either because they're not like me. I would take him to a place where, I don't know, we feel at ease … (…) I think it's important not to go too far beyond your status, because it's very difficult to adapt. If you go higher or lower, it's very different. (Mr Andreu, university education)

'Schools are the students that go to the schools' (van Zanten 2003, 2006), or the families of the students that go to the schools; then, the association of specific school social compositions with an *us* that is defined as an opposite of *them* becomes a key driver of school choice. Continuing to be one of *ours* requires being with *ours*. Aspiring to be one of *them* becomes being with *them*. Beyond being spaces for educational development, schools are spaces of socialisation and sociability. Thus, being positioned in highly capitalised social networks – in terms of social,

cultural or economic capital – places children in optimal dynamics of socialisation and sociability for preserving or advancing their original social position.

This explains why, amongst more qualified parents, we find a greater predisposition to subordinate expectations of schools' pedagogical dimensions to a concern for their social dimensions. While some families apply this subordination in a natural way, where the concern for educational projects proves to be euphemistic, others worry about it – they have the feeling they are betraying a legitimate concern. At the end of the day, only a few families opt for a school that has a highly attractive educational project but that is socially 'inappropriate'. In contrast, many families are willing to make sacrifices or concessions in the pedagogical field in order to guarantee that they will share a school with families they consider 'appropriate'. The following is clearly illustrative in this sense:

> We would like it to be a public school, because I believe in public education, and I like that it is secular and open. But I think that public education is very good in some areas and not so good in others. It's clear that the schools in the high-class neighbourhoods are schools with people of a certain social class and they are in areas where people don't mix, so the level is perhaps higher, even in linguistic terms. One of the public schools we're interested in our neighbourhood (socially heterogeneous neighbourhood) has a good project like this. They are very involved and they work very hard. But in the end we signed him up to a subsidised private school in the high-class neighbourhood because I work there. Maybe it doesn't have the character of this public school in our neighbourhood, but the children that go there give us a lot of confidence, even though the families are a little bit posh. (Mr Bosch, university education)

Conclusion: the fallacies of school educational projects

In short, the interest that most families share in schools' educational projects subsumes in their disposition to socially position their children. Thus, the general ignorance of the concrete characteristics of educational projects that we have observed in most family discourses should not be attributed solely to the difficulty that they say they have in decodifying the messages of those projects. Rather, it is a result of the inherent gap between the type of information that educational projects can provide and the type of information that families are looking for. Whether they are looking for privileged schools with academic excellence or seeking a school that will provide them with certain basic guarantees, most families look to educational projects for indicators of the quality of the school, of the opportunities for academic success that it offers. And yet a school's educational project provides other type of information: it reveals *how it educates* (its pedagogical and organisational model), not *what it achieves* (academic results). Educational projects therefore maintain their rhetorical relevance as a guide for and as a legitimisation of school choice, but they are less significant as real criteria in the practice of selection when compared to other school characteristics and school social composition in particular. This is how the policy emphasising school educational projects is enacted by the majority of the families interviewed, and together with the establishment of unequal positions of families in the field of school choice, this raises questions about the supposed progression towards the ideal of the autonomous and rational citizen-consumer that this policy aims to develop in the framework of school choice.

From this point of view, it could be stated that policies emphasising educational projects can contribute to legitimising – based on educational parameters – dynamics of school choice that mainly correspond to criteria of a social nature. In other words, this policy, designed to widen the margin of choice between a greater variety of schools, can become a tool of legitimisation of 'circuits of schooling' (Ball, Bowe, and Gewirtz 1995), in which the most capitalised families articulate strategies of 'social closure' (Ball 2003). Similarly, this policy has the potential to promote 'educational niches', where reciprocal adaptation between certain identifications of pedagogical models and certain family profiles is produced (Dupriez and Cornet 2005). Furthermore, it would be valid to expect that a wider application of this tool of legitimisation would contribute to an increase in the level of school segregation in contexts in which it is developed.

To verify this hypothesis it would be necessary, at the micro level, to study in-depth the specific contents of a sample of educational projects as well as the conditions of their creation and to position them in relation to the profile of students that the schools teach or aspire to teach. In quantitative terms, it would be pertinent to evaluate the impact of the introduction of the school autonomy policy – and more specifically, the policy of educational projects – on school segregation dynamics in the various social contexts. Approaching the two studies from a perspective of international comparison – from which education regimes with different trajectories towards the education quasi-market could be compared – should certainly prove to be informative. It would also allow us to specify the real contribution of some of the elements of the quasi-market (policies of autonomy and pedagogical differentiation, amongst others) to patterns of school choice amongst a sample of families. Yet it is important to note that the analysis presented here does allow us to establish some of the dangers that the policy under consideration represents for real equality of opportunities in the framework and the very processes of school choice.

Notes

1. In 2011 in Catalonia, 33% of the total number of elementary students was enroled in private schools (31% in subsidised private schools, 2% in independent private schools); in Barcelona, 58% were in private schools (55% in subsidised private, 3% in independent private).
2. These are (Departament d'Educació 2007): having siblings at the chosen school or working there; living in the school's catchment area or the parents' place of work being located in it; living in the same municipality as the chosen school, but not in its school catchment area; mother or father receiving a minimum public income; and any member of the family having a level of disability equal to or greater than 33%.
3. In interviews, we consider the education level of the person being interviewed (in almost all cases, the mother); as for the quantitative exercises, categories are assigned according to the highest credential reached by either of the two parents.
4. This inequality between more and less qualified families in the use of school educational projects as a criterion of school choice explains why the quotations presented in the article are almost all from university-educated parents.
5. The odds ratios are relevant measures when interpreting the results of the logit regressions and they indicate how the relationship between the probability of a situation and the probability of the reference situation is altered when the value of the variable under consideration is increased by one unit (keeping all other independent variables constant). Thus, values greater than one indicate increases (or advantages) in the probability relationship, while values lower than one demonstrate decreases (or disadvantages).

6. Tracing the origin and diffusion channels of such discourse goes beyond the scope of this article. Such work has been carried out by Ball for the UK (2007, 2008), and has been partially extended by the same author and colleagues to the case of Spain (Ball 2012b; Olmedo 2013). In fact, beyond the political declarations by means of which authorities justify and account for the underlying values of neoliberal education reforms, a complex advocacy industry in favour of these same values is emerging in Spain. This industry includes new policy communities and hybrid networks of business foundations, commercial trusts, social enterprise agents and public authorities.
7. Proximity is still an important criterion for highly qualified families. Our study identifies a number of university-educated parents who value the idea of community and opt for the local school. This same pattern has been observed among middle class families in Berlin (Noreisch 2007) and in various UK cities, including London (Crozier et al. 2008). However, the quantitative exercises operated here still indicate that the avoidance of schools located very far from home is less prevalent amongst highly qualified families than amongst less qualified families (see Tables 2 and 4).
8. In the Catalan school system, where the dissemination of school achievement scores is not allowed, some schools made information regarding attainment available to parents.

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Publicació C

Títol: School segregation and its effects on educational equality and efficiency in 16 OECD comprehensive school systems

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School Segregation and Its Effects on Educational Equality and Efficiency in 16 OECD Comprehensive School Systems

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Using PISA data for 16 Western OECD countries having comprehensive school systems, we explore the conditions under which the socioeconomic composition of schools affects educational efficiency and equality, to a greater or lesser extent. First, a multilevel analysis is applied to examine and compare the effect of school socioeconomic composition on students' outcomes across countries and comprehensive models. Second, a simulation exercise shows the variations in the efficiency and equality levels that would result in two distinct hypothetical school scenarios in each country—a segregated scenario and a nonsegregated scenario. We find that a hypothetical reduction in school segregation would positively affect educational equality in all of the countries considered, but the impact on levels of educational efficiency in individual countries varies with the structure of comprehensive schooling.

School segregation warrants policy attention because of evidence from many countries that segregation affects students' educational opportunities.[1] Indeed, a great number of studies have examined the impact of school segregation on students' achievement levels and inequalities among them. Although many of these studies have been found to present a host of methodological problems (Schofield 1995), it is well established that school segregation shapes student outcomes because of school composition effects (Thrupp 1995). Thus, a rigorous assessment of the scope and functioning of the school composition effect is needed when dealing with the issue of segregation and its possible impacts on educational efficiency and equality.

As explained in the next section, previous research on school composition has focused on a wide range of its dimensions—socioeconomic, ethnic, ability, gender, and so forth. Nonetheless, specific aspects of the scope and functioning of these effects remain insufficiently explored. We refer here to the nonlinear nature of such effects, whereby equivalent increases in the composite factor do not produce equivalent changes in the outcome variable. This is certainly a crucial aspect of the logics and implications of the school

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[1] In this article we use the term "segregation" to mean the uneven distribution of specific groups of pupils characterized by specific variables (socioeconomic background, immigrant status, gender, etc.) between schools in a given territory (in our case, the municipality, a region, a country). This definition refers to a de facto situation, not to an intended school policy to allocate pupils' diversity.

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composition effect. In fact, if the reduction of school segregation in a particular setting can have any positive impact on overall levels of efficiency and equality, it is precisely due to the nonlinear pattern followed by the school composition effect.

In this article we aim to contribute to the existing literature on school composition effects, taking a further step toward the identification of the methodological and policy implications of the scope and logics of such effects. Drawing on the Program for International Student Assessment (PISA) data for 16 Western Organization for Economic Cooperation and Development (OECD) countries, all of which share the characteristic of having a formal comprehensive school system, we explore the contextual conditions (mainly the characteristics of the school systems) under which the school composition effect contributes to educational efficiency and equality to a greater or lesser extent. More specifically, we aim to answer two complementary basic sets of questions. First, do school composition effects vary between countries, and how strong are these effects? Such questions are approached through multilevel modeling. Second, would a reduction in school socioeconomic segregation in the countries considered produce any significant impact (whether positive or negative) on their levels of academic equality and efficiency? And do these impacts vary between the distinct groups of students in each country? We address these questions through a simulation exercise in which the academic outcomes of two hypothetical school settings—a segregated scenario and a nonsegregated scenario—are compared within and between countries. The major contribution of this article lies in the attempt to answer this second set of questions. Nevertheless, as we see below, the conclusions we reach with regard to the first, preliminary set of questions constitute the foundation of this attempt.

Background

School Segregation and School Composition Effects

Since the 1966 publication of the Coleman Report in the United States, three common and widely accepted conclusions have been reached by research centered on school composition, both in country-specific studies (in the US and in European countries) and in comparative studies focusing on primary or secondary education. First, even when accounting for individual characteristics, student performance tends to improve in schools with higher proportions of students of high socioeconomic status (OECD 2005; Van Ewijk and Sleegers 2010), students with high ability (Opdenakker and Van Damme 2001; Hanushek et al. 2003), students who are girls (Hoxby 2000; Van de Gaer et al. 2004), and natives of the respective country (Hanushek et al. 2002; Dronkers and Levels 2007). Second, student performance is more strongly linked to the socioeconomic status of schools and classes and to the ability of entering students, as opposed to other compositional characteristic

such as the proportions of girls or immigrant students (Rumberger and Palardy 2005; Van der Slik et al. 2006). Third, while the net effect of school composition variables on student performance tends to be greater than the net effect of variables related to pedagogic practices and organizational processes, it has also been made clear that mutual interactions exist between these two sets of variables (Garrison 2004; Dumay and Dupriez 2007, 2008; Willms 2010).

Beyond these generally accepted findings, there are several studies that have focused on the "asymmetric" nature of the school composition effect, in the sense that the composition effect has a greater impact on specific groups of students, mainly the underprivileged[2] and students of ethnic minorities.[3] Moreover, scholars have also found empirical support for an interaction effect between individual ability and school composition on achievement (Luyten and van der Hoeven-van Doornum 1995; Thomas et al. 1997; De Fraine et al. 2003). For instance, an outstanding study by Marie-Christine Opdenakker and Jan Van Damme (2001) on Belgian secondary students concluded that high-ability students from families of low socioeconomic status (SES) are almost twice as sensitive to schools' ability composition as high-ability students from high-SES families.

The symmetric/asymmetric nature of the school composition effect interacts with its linear/nonlinear characteristics (Andersen and Thomsen 2011). Unlike a linear scenario, a nonlinear pattern indicates that equivalent increases of a specific unit in a given composite variable produce distinct marginal effects on students' outcomes. This may be due to the existence of tipping or threshold points—that is, when the marginal effects of a composite variable increase or decrease significantly when such a variable reaches a critical value. This nonlinear pattern can affect all students to a similar extent (symmetric situation), or it can affect distinct groups of students differently (asymmetric situation). In the same way, a linear pattern can affect all students either symmetrically or asymmetrically. It is important to emphasize a central fact from the foregoing discussion: if the school composition effect enters linearly in the educational production function, then the aggregate level of educational efficiency will remain unaffected by a reduction in school segregation, and the opposite will occur in a nonlinear case (Benabou 1996).

Studies exploring the repercussions of nonlinear composition effects for learning outcomes are scarce, but Simon Andersen and Mette Thomsen (2011) offer an exemplary investigation of these repercussions. Drawing on the Danish register data for lower secondary public schools, these authors analyzed the extent to which immigrant and native students are affected

[2] Sammons et al. (1993); Zimmer and Toma (2000); Kahlenberg (2001); Robertson and Symons (2003).

[3] Jencks and Mayer (1990); Hoxby (2000); Hanushek et al. (2002); Hochschild and Scovronik (2003); Andersen and Thomsen (2011).

differently by schools' ethnic concentration and demonstrate mathematically the existence of a close relationship between asymmetric effects (between natives and immigrants) and nonlinear general effects (for all students together). The authors find that immigrant students are more deeply affected by schools' ethnic concentration than is the case among native students. The investigation revealed a tipping point for all students when the immigrant concentration reached 50 percent. Because of this tipping point, the relationship between immigrant concentration and mean student achievement is concave. Thus, Andersen and Thomsen concluded that total student performance would be improved by establishing more ethnically mixed classes, as far as desegregation would increase the educational outcomes of immigrant students at minimal expense to the educational outcomes of native students. Andersen and Thomsen did not attempt to quantify increases in total efficiency and equality levels due to possible student reallocations, nor did they estimate what these levels would be in a polarized school setting in comparison to a hypothetical setting of ethnically heterogeneous schools. Their focus on ethnic school composition did not include consideration of the possible scope of socioeconomic composition effects.

The Role of Educational Systems in Attenuating/Accentuating Composition Effects

Past researchers have assessed the extent to which the relationship between social status and educational performance is moderated (or accentuated) by specific national educational policies. For instance, drawing on the PISA 2006 data set and focusing on countries in the European Union (EU), Raphaela Schlicht and colleagues (2010) found that contextual variables such as the time spent at school, the level of preschool enrollment, the amount of educational expenditure, and the existence of a tracking school system can have a significant impact on social inequality in education, while such effects tend to be nonlinear and dependent on the country's political ideology tradition and socioeconomic structure. Similarly, analyzing data from three editions of the European Social Survey (2002–6), Majka Van Doorn and colleagues (2011) proved that the pace of industrialization adopted by a particular country does partly explain the decreasing effect of parents' level of education on children's educational attainment levels. This impact is complemented by other interacting contextual factors, such as the quality and structure of the school system.

Several scholars have underlined the relationship between the structure of educational systems and students' achievements. In this respect, evidence suggests that less comprehensive school systems—because they allocate students early into different educational tracks—tend to exacerbate the association between individual inequalities (socioeconomic and cultural) and performance inequalities, while not making any significant contribution to increasing the general average of achievement results (OECD 2005; Dupriez

and Dumay 2006; Hanushek and Wöβmann 2006). Moreover, the country variation in the degree to which the parents' education level influences students' attainment appears to be associated with the institutional structure of national educational systems, where the most stratified systems are those that limit the margin for educational mobility to a greater extent (Brunello and Checchi 2007; Pfeffer 2008).

Many previous studies have sought to examine the role that certain school regime characteristics play in the relationship between individual social background and individual educational outcomes. Nonetheless, comparative studies have tended to disregard the role that school composition may play in the relationship between school system characteristics and individual educational performance and inequalities. What remains generally unexplored is the extent to which specific educational policy conditions can attenuate the impact of school composition on students' achievement.

In addressing this issue, a remarkable exception to the foregoing generalization is the study by Michele Raitano and Francesco Vona (2010). Using data from PISA 2006, these authors account for the mediation of school tracking models in the relationship between school heterogeneity and students' performance in 27 OECD countries. Interestingly, Raitano and Vona found that the effects of school socioeconomic composition variables differed depending on the country's tracking policy. At a broader level, the authors showed how the significance of the tracking variable—in the sense that tracking systems tend to widen the opportunity gap between students from different backgrounds—disappears when interactions between individual socioeconomic background and school socioeconomic heterogeneity are added to the models. In other words, the effect of tracking policies appears to be spurious and largely driven by school composition features. Nonetheless, when regressions are run separately for the two groups of countries (tracking and nontracking countries), results continue to show that the effect of school heterogeneity is larger in early tracking systems than in comprehensive countries.

With regard to this distinction, a useful typology of characteristics of institutional education was constructed by Nathalie Mons (2007) and later refined by Vincent Dupriez and colleagues (2008). Widening the very narrow comparison of early tracking countries and nonearly tracking countries, this typology relies on the assumption that educational systems operate different contextual adjustment mechanisms in order to deal with students' social and ability heterogeneity: tracking (as commonly measured in more conventional school system typologies), ability grouping, grade retention, and individualized support. From the combination of such adjustment variables and through multiple correspondence analysis, four salient heterogeneity management models emerge. The first is the "separation model," mainly characterized by an early tracking system and extended practices of ability grouping and grade retention. Second is the comprehensive "à-la-carte integration model," which

offers a relatively common core curriculum until the age of 16 but applies an intensive policy of ability grouping by means of setting and streaming. Third is the comprehensive "uniform integration model," which deploys a consistent, common core curriculum until lower secondary education, and where grade retention and ability grouping appear as the main parameters dealing with students' heterogeneity. Fourth is the comprehensive "individualized model," where early tracking, grade retention, and ability grouping mechanisms are replaced by various forms of differentiation and individualized teaching.[4] Neither the work of Mons (2007) nor of Dupriez et al. (2008) addresses the issue of the possible interaction between such models and the scope of school segregation (measured in terms of school composition effects). However, we find their school system typology useful for our analytical purposes and we use the Mons typology to discuss the results.

Methods

Data and Sample

Our analyses draw on data from PISA, an international survey of a large set of industrialized countries, most of which are members of the OECD. Its main objective is to evaluate, by means of standardized questionnaires, students' proficiency in reading, mathematics, and science at the age of 15, when students in many of the countries surveyed are approaching the end of their compulsory schooling. The scores obtained in each of the competences are standardized across the countries to have a mean of 500 and a standard deviation of 100. The student questionnaire also allows for the construction of student profiles by providing information on the socioeconomic and cultural backgrounds of individuals and families. In parallel with the student questionnaire, the principals of the surveyed schools are required to provide information on characteristics of classrooms, the school, and its teachers. In the PISA 2009 survey, the reading competence was surveyed as the major domain, meaning that it was assessed through a large and comprehensive set of test items, whereas math and science were surveyed as minor domains.

In order to study a group of countries with relatively comparable socioeconomic and political conditions and similar educational system configurations, we focus our analyses on 16 Western OECD countries, all of which operate comprehensive school systems. We concentrate on comprehensive systems in order to reduce country heterogeneity bias and, more specifically, to avoid the selectivity bias that would result from a nonrandom assignment of students to schools with distinct educational programs. Therefore, focusing on comprehensive models first allows us to concentrate on what Willms

[4] For more details on the data and techniques used for the construction of such a typology and for the classification of countries within each of the resulting models, see Dupriez et al. (2008).

(2010) refers to as "horizontal segregation," meaning the extent to which students from differing SES backgrounds are distributed unequally between schools and, second, to include a sample of students who, at the time of the PISA assessment, were still in comprehensive schooling, sharing the same schools, and being taught a common curriculum for a significant period of time, thereby allowing school process and composition variables to have an impact on their performance. Furthermore, given that we intend to analyze the effect of school composition variables, and in order to reduce possible measurement errors at the school level, we have restricted the sample to include only those schools for which PISA 2009 provided data for at least 15 students.[5] Our final sample includes 130,229 students clustered in 4,440 schools in 16 countries (see table A2 in the online appendix for country figures). As mentioned above, the statistical work carried out in this study consists of both multilevel analysis and also a scenario simulation.

Multilevel Modeling

The purpose here is to answer the questions posed in our introduction: do school composition effects vary between countries? How strong are these effects? More specifically, we aim to examine and compare the scope of school composition effects across countries, controlling for the possible effects of other school and student level variables. Due to the hierarchical structure of the PISA data set, we used a multilevel analysis. The rationale for using multilevel models is that they allow us to overcome the limitation of the ordinary least squares (OLS) regression estimations, which violate the assumption of independence when dealing with individuals clustered in schools (Raudenbush and Bryk 1986; Raudenbush and Willms 1995). In order to examine the potential relationships between, on the one hand, the independent individual and school level variables, and on the other hand, our dependent variable (students' reading scores), we operate a two-level analysis, where students are nested within schools.

Our dependent variable is the scores obtained by students in the PISA 2009 reading test. As previously explained, in PISA 2009, reading skills were assessed more systematically than math and science competence: each student answered about 100 reading items, while for math and science only some students answered test items, and only about 30 items or less. In this sense, the reading scores are a more precise measurement to be used as the dependent variable.

As student-level independent variables, we considered three factors whose

[5] Other studies dealing with school composition effects apply this same sample restriction for the same purposes (Rangvid 2007; Raitano and Vona 2010). This restriction introduces a possible bias when applying the student weight variable estimated by PISA (there are no alternative PISA variables to weight or reweight subsamples of students). In our case, we lost 3 percent of the total original student sample for the countries considered. However, considering our focus on school composition, we estimate that even if these 3 percent of students were not randomly distributed across schools, the bias due to measurement errors would be higher if we were to include schools with very few sampled students.

influence on student outcomes and opportunities have been repeatedly demonstrated by educational research. These are the index of student economic, social, and cultural status (ESCS), gender, and immigrant status. The ESCS variable has been centered so it scores zero at the country mean. See table A1 in the online appendix for a description of the independent variables used in the analyses. At the school level, we used composite independent variables, and we gave special consideration to the mean ESCS of schools. This information comes from the aggregation at the school level of the corresponding individual measures of ESCS. Following the methodological recommendations of Martin Thurpp and colleagues (2002) and Reyn Van Ewijk and Peter Sleegers (2010), we control for possible school ESCS composition effects by including in the equation a combination of compositional variables that measure the various dimensions of pupil composition. These are the "proportion of immigrant students" enrolled in the school, and the "proportion of male students" enrolled in the school. Both variables have been centered at the country mean.

In addition to including these composite variables, our explanatory models also control for several school measures that can capture possible covariates of school composition characteristics. Working on the basis of previous school composition research findings, as well as building on school effectiveness research conclusions, we consider measures related to school structures, pedagogic practices, and organizational processes. These are school type (public or private), the student-teacher ratio, the index of academic selectivity, the index of ability grouping, the index of school responsibility for resource allocation, the index of school responsibility for curriculum and assessment, the index of teacher shortage, and the index of the school's educational resources (table A1). Estimating the effects of these variables can enlarge our understanding of those school features that mediate in the relationship between school social composition and student outcomes. Some of these school structure and process covariates can also be seen as control variables, whose inclusion in the models helps to avoid the potential problem of selectivity bias due to a nonrandom assignment of students to schools, a problem that can arise even in comprehensive systems. All school process continuous variables have been centered at the corresponding country mean.

Stepwise Construction of the Models

Multilevel models are performed stepwise, where predictors are added as follows: model 1 includes only student level variables; model 2 adds to these the school process variables; model 3 adds to these school gender composition and school immigrant composition; model 4 is the full model, and it includes student level variables, school process variables, school gender composition, school immigrant composition, and school ESCS composition. The steps of this sequence can be followed in table A4 in the online appendix.

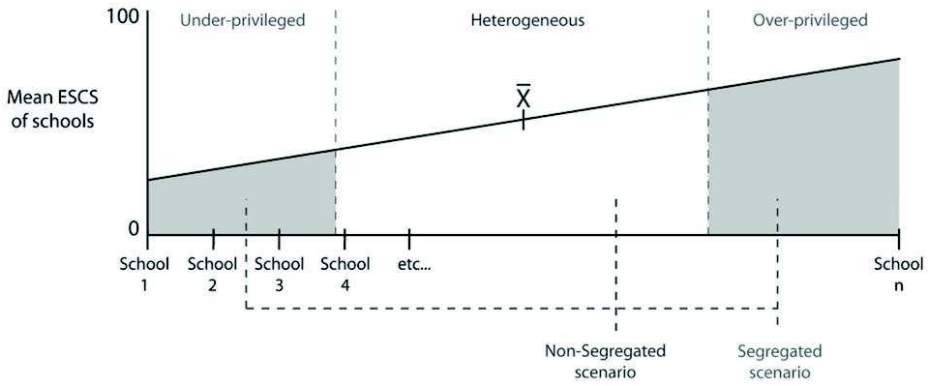

Fig. 1.—School scenarios and school categories

Scenario Simulation

This type of analysis constitutes the central contribution of this article and consists of a simulation exercise that aims to answer the second set of questions posed above: would a reduction in school socioeconomic segregation produce any significant impact (positive or negative) on country levels of academic equality and efficiency? Do these impacts vary between the distinct groups of students in each country? On the basis of the nonlinear and context-specific functioning of the school composition effect argument, we test the variations in the achievement efficiency and equality levels that would result from comparing the outcomes of students placed in two distinct hypothetical school scenarios in each country. First, we test for the variations that would result for students in a scenario composed of schools categorized as "heterogeneous schools" (see below), which we term the "nonsegregated scenario." Second, we test for the variations that would result in a scenario composed of the sum of those schools categorized as "overprivileged" and "underprivileged" schools (see below), which we term the "segregated scenario." To a great extent, the statistical procedures used for our scenarios draw on a further elaboration of a selection of the variables used in the multilevel models. More specifically:

Student-level variables.—The dependent variable is still the scores obtained by students and schools in the PISA 2009 reading test. Scores are assessed according to the students' ESCS quartiles. We treat ESCS in a relative sense, in that 25th percentiles are estimated separately within countries, thus describing the social hierarchy within countries (Willms 2010).

School-level variables.—We focus here on the "mean ESCS of schools," grouping schools into three distinct categories according to their mean ESCS (see fig. 1): (1) schools with an advantaged socioeconomic composition (ov-

erprivileged schools), where school ESCS is statistically significantly higher than the country average; (2) schools with a disadvantaged socioeconomic composition (underprivileged schools), where school ESCS is statistically significantly lower than the country average; (3) schools with an average or mixture of socioeconomic compositions (heterogeneous schools), where school ESCS is not statistically significantly different from the country average.

Setting the Scenarios

As explained above, we define the nonsegregated scenario as comprising heterogeneous schools and the segregated scenario as comprising overprivileged and underprivileged schools (see fig. 1). So as to generate two scenarios that are mutually comparable within and between countries, we apply a weighting factor that is the result of three basic operations.

In our first operation, we account for the PISA weight variable for students. Second, with regard to the specific construction of the segregated scenario, we adjust the weights of underprivileged and overprivileged schools. This enables us to simulate a scenario that is internally symmetric, where each category of school has the same number of students (50 percent of students in each category), meaning that segregated scenario outcomes will not be conditioned by the unbalanced distribution of students between the two school categories. However, in order to avoid the overrepresentation of outstanding privileged schools (among overprivileged schools) or outstanding disadvantaged schools (among underprivileged schools), we refine the symmetrical adjustment applied to each category on the basis of their respective mean ESCS deviation from the mean ESCS of the totality of schools in each country.[6] In our third operation, students' weights in each of the scenarios (segregated and nonsegregated) are adjusted by ESCS, immigrant status, and gender, according to the percentages these variables show at a country level. By doing so, we avoid the possibility that the outcomes of scenarios are conditioned by the uneven distribution of students' backgrounds between them. Thus, we generate a simulation in which both scenarios have, overall, the same profile of students, and in which differences between scenarios are only due to how the comparable student bodies are distributed between schools. As a result of such procedures, in each country,

[6] If both underprivileged and overprivileged schools deviate from the schools' mean ESCS to the same extent, then each school category would remain adjusted to represent 50 percent of schools within the segregated scenario. In the case, for instance, that the overprivileged schools' mean ESCS deviation represented 55 percent of the overall deviation between overprivileged and underprivileged mean ESCS (and therefore, the underprivileged mean ESCS deviation from the general mean represents 45 percent), then readjustments are applied to achieve a situation in which overprivileged schools will represent 45 percent of all schools in the segregated scenario (and underprivileged schools will represent 55 percent). In other words, we aim to subtract weight from those schools whose mean ESCS is further from the country's mean ESCS, and vice versa, so that the internal student ESCS distribution of the segregated scenario does not distort what would be a plausible situation given the real student ESCS distribution in each country (see Methodological Note 1 in the online appendix for more details on the weighting procedure followed).

each scenario has distinct weight values applied to it: operations 1 and 3 define the weights for students in the nonsegregated scenario; operations 1, 2, and 3 define the weights for the segregated scenario. Then, for students' score estimations, the two scenarios are operated as if they were separate subsamples.

Types of Tests

Our aim is to compare the levels of efficiency and equality of achievement outcomes that each scenario generates. In order to conduct this comparative analysis, we use two types of indicators. "Academic efficiency" is measured as the mean reading score of the totality of students enrolled at the group of schools under consideration. "Academic equality" is operationalized by means of two measures: (1) the average distance between the mean scores obtained by advantaged students (students in the bottom ESCS quartile) and disadvantaged students (in the top ESCS quartile), referred to as "equity between extremes"; (2) the regression coefficient for students' ESCS, which is the gradient of the socioeconomic slope for reading scores (Willms 2010) and a measure of "equality of opportunities of educational achievement" (Dupriez and Dumay 2006; Shavit and Blossfeld 1993).[7]

Results

Analysis 1: Assessing School Composition Effects by Means of Multilevel Modeling

Since we were interested in the extent to which composition effects vary depending on the school system under consideration, multilevel models were estimated in each country (see table 1, and tables A3 and A4 in the online appendix).

We focus on the degree to which schools' socioeconomic composition variable explain student performance in the countries under consideration. In effect, this is a determining variable in all of the countries in our sample, except in Finland (where it is not significant). However, the explanatory strength of school ESCS does vary across countries. In this sense, in the full model, the regression coefficient of school ESCS is comparatively high in France, the United Kingdom, Australia, Sweden, Ireland, Greece, the United States, and New Zealand—with positive values near to or greater than 50. By contrast, the coefficients in the remaining countries have positive values less than 30.

The inclusion of the socioeconomic composition variable in the model reduces the impact of the other school composition variables on academic performance, and particularly reduces the negative effect of immigrant composition. In this sense, in the move from model 3 to model 4, the immigrant

[7] We take the coefficient for students' ESCS from a regression model where the effect of all other individual variables considered is controlled for.

composition variable loses its significance in France, Denmark, and Iceland. In the United Kingdom, Australia, and Canada the impact of school composition is smaller in model 4.

In general terms, we observe how the weight of the process variables is not as transversal as that of socioeconomic composition. In any case, the introduction into the model of the socioeconomic composition variable reduces the effect of those process variables that showed a relevant explanatory capacity in models 2 and 3. For example, the gains that can be attributed to private schooling are no longer significant in the full model in the cases of Australia, Ireland, New Zealand, United Kingdom, United States, and Denmark. With respect to the student-teacher ratio, this variable loses its significance in the full model in Ireland, Spain, and Portugal. Finally, the negative effect of the teacher shortage variable loses its significance in the United States and Denmark.

Data presented in figure 2 permit us to understand the contribution of school variables in the explanation of the between-school performance variance. At one end of the scale are Poland and Finland, where the global effect of the school variables under consideration is minimal, though still significant—percentages of less than 15 percent. At the other end, we observe how the effect of the school variables considered is particularly high in the United States, Greece, Portugal, and Iceland, with contribution percentages of more than 30 percent.

It is worth highlighting the comparison of the net effect of school composition (and, in particular, of socioeconomic composition) and the net effect of the process variables being considered.[8] In all countries except Iceland and Finland, the net effect of composition is markedly greater than the net effect of the school process variables. This is particularly notable in those countries where school-level factors contribute more to explaining the total variance in between-schools results (see table A3—the empty model—in the online appendix). In relative terms, the percentage of the net effect of school composition on the between-school achievement variance that can be attributed to the school factors under consideration is significant and exceeds 70 percent in the United Kingdom, Portugal, Sweden, and Ireland.

Finally, the net effect of socioeconomic composition appears clearly greater than the net effect of gender and immigrant composition in all of the countries of the sample, except in Finland and Poland. This explains the

[8] We draw here on the procedure followed by Dumay and Dupriez (2008, 461): "The net effect of the school composition is calculated by subtracting the part of the between-schools variance explained by the model with school processes variables only from the part of the between-schools variance associated with the full model. The net effect of the school processes is calculated by subtracting the part of the between-schools variance explained by the model with school composition only from the part of the between-schools variance associated with the full model. Finally, the joint effect of school processes and group composition is calculated by subtracting the part of the between-schools variance associated with the two net effects (and with individual characteristics) from the part of the between-schools variance explained by the full model."

TABLE 1
MULTILEVEL MODEL TO ESTIMATE STUDENT AND SCHOOL VARIABLES' EFFECTS ON READING SCORES

Fixed Effects	France[a]	United Kingdom	Australia	Sweden	Ireland	Greece	United States	New Zealand	Portugal	Canada	Iceland	Denmark	Spain	Norway	Poland	Finland
Student level:																
Intercept γ_{00}	510.9***	540.6***	532.5***	521.3***	474.3***	504.2***	510.5***	586.3***	509.4***	538.1***	528.3***	511.3***	505.9***	535.4***	524.1***	563.7***
	(3.9)	(14.7)	(8.0)	(5.1)	(19.0)	(4.3)	(7.2)	(17.1)	(3.1)	(4.0)	(7.2)	(2.8)	(2.6)	(4.5)	(4.0)	(3,4)
Student ESCS[b]	14.7***	27.9***	28.8***	31.8***	29.4***	16.2***	26.6***	38.7***	17.9***	21.6***	22.6***	28.4***	20.1***	32.5***	33.3***	27.3***
	(1.6)	(1.6)	(1.3)	(1.9)	(2.2)	(1.4)	(1.7)	(2.0)	(1.0)	(1.0)	(2.1)	(1.4)	(.7)	(2.0)	(1.6)	(1.5)
Gender	−26.1***	−23.5***	−35.3***	−45.2***	−38.0***	−33.4***	−30.9***	−43.8***	−32.2***	−33.0***	−43.7***	−28.6***	−27.2***	−48.5***	−48.2***	−53.8***
	(2.4)	(2.3)	(1.8)	(2.9)	(5.0)	(2.4)	(2.6)	(3.5)	(2.0)	(1.5)	(4.3)	(2.4)	(1.3)	(2.7)	(2.3)	(2.3)
Immigrant status	−13.5	−18.5*	9.2**	−54.6***	−24.8**	−15.2*	−2.4	−13.8**	−22.7**	−10.6**	−53.5**	−45.1***	−48.1***	−38.7***	. . .	−67.1***
	(7.9)	(7.1)	(3.0)	(7.9)	(6.9)	(6.1)	(5.6)	(4.2)	(6.0)	(3.2)	(14.8)	(6.3)	(2.9)	(7.7)		(12.8)
School level:																
School type	. . .	−25.1	4.5	−18.6	15.5	−27.5	−.7	−5.9	−1.6	23.2**	. . .	2.7	1.8	−17.7	6.9	−11.0
		(10.2)	(4.4)	(9.3)	(8.3)	(15.0)	(14.2)	(12.3)	(12.2)	(7.0)		(4.9)	(4.5)	(20.6)	(19.1)	(12.1)
Student-teacher ratio	. . .	−1.3	.3	.2	1.1	3.8*	−.6	3.5**	.8	1.5***	−5.2*	2.0**	.7	.0	.0	1.9
		(.7)	(.8)	(.7)	(2.4)	(1.4)	(.5)	(1.0)	(1.2)	(.3)	(2.0)	(.7)	(.4)	(1.0)	(.8)	(1.0)
Responsibility curriculum and assessment	. . .	.9	−4.1*	4.1	−3.1	−9.9	−1.6	−.6	−2.1	.4	7.4	2.3	1.3	1.5	−1.2	1.2
		(2.0)	(1.8)	(2.6)	(4.3)	(12.0)	(3.0)	(2.7)	(7.8)	(2.4)	(3.7)	(1.7)	(1.7)	(3.1)	(2.4)	(2.2)
Responsibility resource allocation	. . .	1.1	−2.0	4.0	−21.7	42.7	1.8	.5	2.8	−.3	3.5	−.1	.7	−.5	1.1	6.0
		(1.6)	(2.3)	(2.6)	(18.0)	(39.1)	(3.0)	(3.5)	(4.8)	(3.0)	(7.4)	(2.0)	(3.0)	(3.9)	(6.2)	(5.4)
Educational resources	. . .	1.5	−1.6	8.7**	−3.2	.6	.1	4.3	−.6	−1.5	.4	−2.6	1.4	4.7	−3.1	5.0
		(1.6)	(1.7)	(3.2)	(3.2)	(3.6)	(2.4)	(2.5)	(2.8)	(1.4)	(4.8)	(2.2)	(1.5)	(3.4)	(2.4)	(2.5)

Teacher shortage	. . .	−.9*	−4.3*	4.6	4.7	2.4	−4.5	−2.8	9.1*	−3.2*	3.8	−5.1	−1.2	−3.7	−2.3	−10.7***
		(1.8)	(1.9)	(3.9)	(4.3)	(3.7)	(3.0)	(2.7)	(4.0)	(1.6)	(4.6)	(2.7)	(2.1)	(3.3)	(4.3)	(3.0)
Ability grouping	. . .	−32.7	2.6	8.0	32.5	16.6	7.7	−32.7	−5.1	−1.4	−2.4	−.4	−3.4	−7.6	5.4	−2.3
		(14.6)	(7.3)	(5.6)	(18.3)	(9.3)	(7.5)	(16.8)	(4.1)	(3.8)	(7.2)	(3.2)	(2.4)	(4.8)	(4.4)	(3.7)
Academic selectivity	. . .	5.9	−2.8	−6.2	4.8	3.9	−3.9	−5.8	−.2	3.7	−14.3	2.0	−4.7	3.6	−1.0	5.0
		(3.3)	(4.0)	(6.2)	(6.8)	(6.1)	(4.8)	(4.4)	(4.5)	(2.8)	(6.7)	(3.3)	(2.8)	(4.8)	(4.5)	(4.2)
% boys	−1.2***	−.1	.0	−.1	−.2	−1.0***	.2	.1	−1.4***	−.4**	.7	−.1	−.3*	−.1	−.9**	−.2
	(.3)	(.1)	(.1)	(.3)	(.1)	(.3)	(.3)	(.1)	(.2)	(.1)	(.5)	(.1)	(.1)	(.3)	(.2)	(.3)
% immigrants	.1	−.5*	.4*	.3	.1	.1	.7	−.2	−1.9***	.3**	−.9	−.2	.3*	.3	1.3	−.9
	(.7)	(.2)	(.2)	(.4)	(.5)	(.3)	(.3)	(.2)	(.5)	(.1)	(.8)	(.3)	(.1)	(.5)	(4.9)	(.7)
Mean ESCS	111.2***	72.6***	61.9***	56.6***	52.6***	51.5***	50.4***	46.8***	38.8***	34.1***	30.7**	30.5***	27.2***	25.5**	16.0**	1.9
	(8.8)	(4.9)	(5.6)	(8.4)	(9.8)	(7.3)	(5.6)	(6.4)	(3.5)	(3.8)	(10.8)	(4.8)	(2.7)	(8.8)	(5.9)	(6.5)
Random effects:																
Within-school variance	4,151.8	5,548.2	6,595.5	6,610.5	6,151.5	4,893.4	6,310.6	6,928.9	4,548.4	5,699.5	7,042.5	5,053.8	4,804.0	6,157.1	5,432.4	5,495.0
	(97.1)	(80.3)	(83.8)	(166.2)	(180.6)	(108.8)	(140.3)	(162.1)	(87.9)	(60.7)	(206.3)	(105.8)	(48.2)	(143.6)	(118.4)	(109.8)
Between-school variance	2,023.6	403.4	490.8	414.2	623.6	899.8	428.6	244.0	449.9	551.5	213.0	201.1	558.3	385.4	345.2	315.0
	(256.1)	(56.1)	(58.0)	(87.7)	(139.2)	(132.9)	(85.6)	(80.5)	(69.2)	(49.1)	(98.6)	(44.5)	(46.4)	(78.2)	(65.5)	(58.8)
Within-school variance explained (%)	9.9	20.5	12.9	20.9	10.6	11.2	11.1	17.3	13.1	14.7	15.5	16.2	20.5	17.6	20.9	20.5
Between-school variance explained (%)	69.6	77.7	76.7	69.8	72.1	67.4	79.5	88.9	80.9	60.6	80.4	79.3	61.0	52.3	70.8	40.8
Between-school variance attributable to student variables (%)	. . .	63.4	65.1	70.3	77.4	45.0	58.5	78.9	52.6	64.0	48.6	78.2	73.2	68.1	84.3	79.7
Between-school variance attributable to school variables (%)	. . .	36.6	34.9	29.7	22.6	55.0	41.5	21.1	47.4	36.0	51.4	21.8	26.8	31.9	15.7	20.3

NOTE.—Countries are listed according to the School Mean ESCS regression coefficient.
[a] School process figures for France are not shown, given that this country does not provide information regarding the characteristics of its schools.
[b] ESCS = Index of Economic, Social and Cultural Status.
* $P < .05$.
** $P < .01$.
*** $P < .001$.

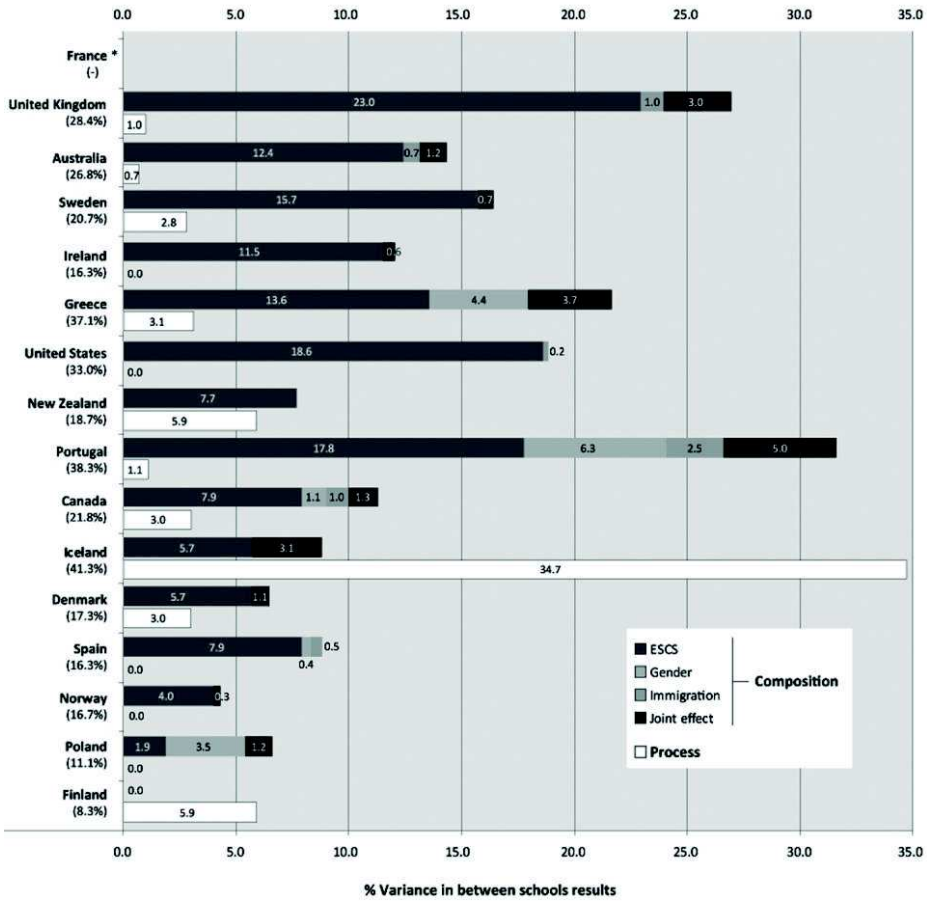

FIG. 2.—Between-school variance explained by school composition and school process variables. School process figures for France are not shown, given that this country does not provide information regarding the characteristics of its schools. A color version of this figure is available online.

fact that the percentage of the net effect of socioeconomic composition on the net effect of school composition (as a whole) is significant and exceeds 70 percent in the vast majority of the countries being considered.

Analysis 2: Comparing School Segregation Outcomes by Means of Scenario Simulation

Having highlighted the general significance and strength of school socioeconomic composition effects across countries, we move now to the results obtained through the simulation exercise, which is based on the creation of two distinct hypothetical school scenarios in each country: a nonsegregated scenario and a segregated scenario. We can describe the outcomes of each scenario in terms of equality and efficiency in each country.

EFFECTS OF SCHOOL SEGREGATION ON EDUCATIONAL EQUALITY AND EFFICIENCY

School segregation and equality levels.—In all of the countries under consideration, the value of the regression coefficient of the individual ESCS variable—a measure of equality of opportunities of educational achievement—is lower in the nonsegregated scenario (table 2). Thus, this is the scenario offering a more favorable situation in terms of equality, given that the reading scores obtained by the students are less conditioned by their ESCS level. The reduction in the regression coefficient if moving from the segregated scenario to the nonsegregated scenario appears less pronounced, though still significant, in Poland, Norway, Finland, and Iceland—with percentages of reduction of less than 20 percent. In contrast, in all of the other countries, this reduction tends to be greater, varying between 25 percent (the US and Sweden) and 66 percent (France).

Likewise, as shown in the same table 2 and in figure 3, the difference between the lower and upper quartiles—equity between extremes—is notably smaller in the nonsegregated scenario in all of the countries. Moving from a segregated scenario to a nonsegregated scenario implies a small reduction of this difference, particularly in Poland, Norway, and Finland, where there is a reduction of less than 20 percent. Conversely, this reduction is particularly high in Greece (41 percent), the United Kingdom (43 percent), Portugal (48 percent), Australia (49 percent), and France (69 percent).

School segregation and levels of efficiency.—The data presented in table 3 indicate the scope of the differences between the average reading scores of students in the segregated scenario and those in the nonsegregated scenario (a positive sign indicates that the nonsegregated scenario is the more favorable, and a negative sign indicates that the segregated scenario is more favorable).

The comparison between levels of efficiency in the two scenarios does not always suggest that the scenario is more equitable, or that the nonsegregated scenario is more favorable in terms of efficiency. In Spain and Iceland the difference in scores between the two scenarios is not statistically significant. In those countries where the segregated scenario is the more favorable, the difference between the results in the two scenarios tends to be moderate: 2 points in Denmark and Poland, 3 points in Finland, Australia, Canada, and the United Kingdom. Only in Norway and Sweden is there a substantial the difference favorable to the segregated scenario (9 points). In those countries where the nonsegregated scenario is more favorable, the differences between the results are more diverse: 2 and 3 points in the United States and New Zealand, respectively; 8 and 9 points in Ireland and Portugal, respectively; and 25 and 27 points in the cases of Greece and France, respectively.

The nonlinear nature of school composition effects.—Here we focus our attention on the patterns of linearity or nonlinearity in the relationship between school categories—underprivileged, heterogeneous, and overprivileged schools—and the predicted scores for the distinct student ESCS quartiles (see table 4).

TABLE 2
School Scenarios' Outcomes in Terms of Educational Equality

	Segregated Scenario					Nonsegregated Scenario					Difference between Nonsegregated Scenario and Segregated Scenario			
	Regression[a]		Scores			Regression[a]		Scores						
Country	Coefficient (Student ESCS)[b]	SE	ESCS Quartile 1	ESCS Quartile 4	Difference between Q4 and Q1[c]	Coefficient (Student ESCS)	SE	ESCS Quartile 1	ESCS Quartile 4	Difference between Q4 and Q1[c]	Coefficient (Student ESCS)	% of Reduction[c]	Difference between Q4 and Q1[c]	% of Reduction[c]
France	66.6	.1	413	563	**150**	22.5	.1	492	539	**47**	−44	**−6**	**−104**	−69
United Kingdom	52.6	.1	442	556	**114**	32.6	.1	465	530	**65**	−20	**−38**	**−49**	−43
Australia	53.7	.2	465	573	**108**	28.4	.3	486	541	**55**	−25	**−47**	**−53**	−49
Sweden	49.5	.3	453	557	**104**	37.3	.3	453	530	**77**	-12	**−25**	**−27**	−26
Ireland	46.1	.5	444	546	**102**	32.2	.5	469	535	**66**	−14	**−30**	**−35**	**−35**
Greece	39.5	.3	424	528	**105**	23.5	.3	467	529	**62**	−16	−40	**−43**	**−41**
United States	45.8	.1	445	564	**119**	34.3	.1	467	549	**82**	−11	−25	**−37**	**−31**
New Zealand	59.0	.5	465	586	**121**	43.5	.5	487	569	**82**	−16	**−26**	**−39**	**−32**
Portugal	35.0	.2	440	545	**105**	20.5	.2	472	527	**55**	−15	**−42**	**−50**	**−48**
Canada	37.3	.2	490	572	**82**	25.0	.2	503	555	**52**	−12	**−33**	**−30**	**−37**
Iceland	29.2	1.7	466	535	**69**	23.7	1.7	466	517	**51**	−6	**−19**	**−19**	**−27**
Denmark	40.7	.4	448	541	**93**	31.5	.4	462	529	**67**	−9	**−23**	**−26**	**−28**
Spain	32.9	.1	437	532	**95**	22.4	.1	456	514	**58**	−10	**−32**	**−37**	**−39**
Norway	39.7	.5	467	545	**78**	34.8	.5	467	532	**65**	−5	**−12**	**−13**	**−17**
Poland	39.7	.1	461	555	**93**	35.7	.1	466	544	**78**	−4	−10	**−16**	**−17**
Finland	33.5	.4	502	570	**69**	28.9	.4	506	561	**55**	−5	**−14**	**−14**	**−20**

[a] Coefficient for student ESCS, controlling for all other student variables.
[b] ESCS = Index of Economic, Social and Cultural Status.
[c] Values that are statistically significant are indicated in bold (significance at 5% level).

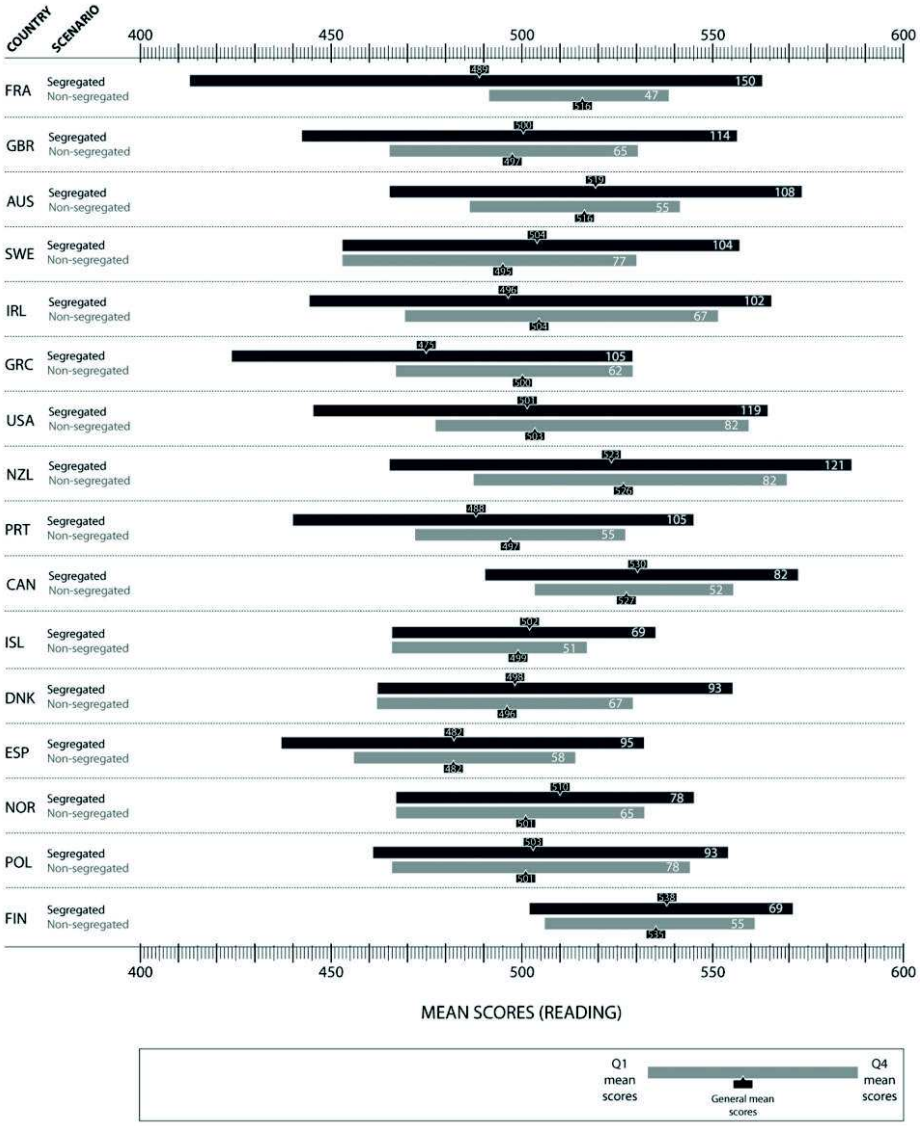

FIG. 3.—Score difference between the bottom and the top ESCS student quartiles and general mean scores, by school scenario.

Indeed, results show nonlinear patterns to be predominant across all countries considered here, whether showing them as a concave curve (when the gains in moving from underprivileged to heterogeneous schools are higher than the losses in moving from overprivileged to heterogeneous schools) or as a convex curve (when the gains in moving from underprivileged to het-

TABLE 3
School Scenarios' Outcomes in Terms of Educational Efficiency

Country	Country Mean Score	Segregated Scenario Mean Score	Nonsegregated Scenario Mean Score	Score Difference between Segregated Scenario and Non-segregated Scenario[a]
France	502	489	516	**27**
United Kingdom	498	500	497	**−3**
Australia	518	519	516	**−3**
Sweden	499	504	495	**−9**
Ireland	500	496	504	**8**
Greece	488	475	500	**25**
United States	502	501	503	**2**
New Zealand	524	523	526	**3**
Portugal	493	488	497	**9**
Canada	528	530	527	**−3**
Iceland	500	502	499	**−3**
Denmark	497	498	496	**−2**
Spain	482	482	482	0
Norway	506	510	501	**−9**
Poland	502	503	501	**−2**
Finland	536	538	535	**−3**

[a] Values that are statistically significant are indicated in bold (significance at 5% level).

erogeneous schools are lower than the losses in moving from overprivileged to heterogeneous schools).

When the majority or all of the quartiles in a country produce a convex curve, the country's efficiency is greater in the segregated scenario. This is particularly evident in Norway, Poland, Sweden, and Australia. In these countries, the various student quartiles demonstrate a clear tendency to lose more if moving from overprivileged schools to heterogeneous schools than they would gain by moving from underprivileged schools to heterogeneous schools. Nevertheless, here we are dealing with aggregate losses and gains that are not particularly accentuated.

Conversely, when the majority or all of the quartiles in a country produce a concave curve, the country's efficiency is greater in the nonsegregated scenario. This is particularly salient for France, Greece, Portugal, and the United States. In these countries, the different student quartiles would tend to gain more if moving from underprivileged schools to heterogeneous schools than they would lose by moving from overprivileged schools to heterogeneous schools. Moreover, the percentage of students in these countries that would experience the positive effects of moving from underprivileged schools to heterogeneous schools is clearly greater than the percentage of students that would lose points in the move from overprivileged schools to heterogeneous schools.

It is important to note that we do not observe regularities or significant tendencies of one student quartile or another to curve more than other quartiles, or to do so in one direction or another. In other words, we do not

TABLE 4
DIFFERENCES IN STUDENT ESCS QUARTILES' SCORES ACROSS DISTINCT SCHOOL CATEGORIES AND PERCENTAGE OF STUDENTS IN UNDERPRIVILEGED AND OVERPRIVILEGED SCHOOLS

	Underprivileged Schools (UPS) → Heterogeneous Schools (HS) (Changes in Scores in ESCS Quartiles When Moving from UPS to HS)								Overprivileged Schools (OPS) → Heterogeneous Schools (HS) (Changes in Scores in ESCS Quartiles When Moving from OPS to HS)							
	ESCS Quartile 1[a]		ESCS Quartile 2		ESCS Quartile 3		ESCS Quartile 4		ESCS Quartile 1		ESCS Quartile 2		ESCS Quartile 3		ESCS Quartile 4	
Country	% Students in UPS[b]	Diff. Score[c]	% Students in UPS[b]	Diff. Score[c]	% Students in UPS[b]	Diff. Score[c]	% Students in UPS[b]	Diff. Score[c]	% Students in OPS[d]	Diff. Score[c]	% Students in OPS[d]	Diff. Score[c]	% Students in OPS[d]	Diff. Score[c]	% Students in OPS[d]	Diff. Score[c]
France	89.0	**90**	67.7	**83**	38.4	**84**	10.2	**101**	11.0	**−31**	32.3	**−23**	61.6	**−41**	89.8	**−33**
United Kingdom	87.8	**28**	67.2	**21**	40.5	**32**	12.9	**53**	12.2	**−21**	32.8	**−32**	59.5	**-30**	87.1	**−30**
Australia	87.9	**26**	67.6	**20**	41.1	**23**	15.7	**15**	12.1	**−31**	32.4	**−24**	58.9	**−26**	84.3	**−33**
Sweden	87.1	**6**	70.5	**16**	41.3	**21**	15.9	**2**	12.9	**−42**	29.5	**−12**	58.7	**−26**	84.1	**−29**
Ireland	92.5	**27**	74.5	**36**	41.9	**27**	12.8	7	7.5	**−25**	25.5	**−8**	58.1	**−27**	87.2	**−13**
Greece	85.1	**45**	64.6	**64**	35.8	**77**	10.0	**66**	14.9	**−26**	35.4	**−16**	64.2	**−9**	90.0	**−8**
United States	89.9	**32**	66.6	**33**	38.1	**33**	13.1	**50**	10.1	**−6**	33.4	**−17**	61.9	**−23**	86.9	**−21**
New Zealand	87.9	**25**	62.8	**16**	37.9	**27**	11.6	**22**	12.1	**−42**	37.2	**−19**	62.1	**−14**	88.4	**−15**
Portugal	90.6	**38**	76.5	**40**	51.0	**31**	13.2	**47**	9.4	**−35**	23.5	**−14**	49.0	**−24**	86.8	**−22**
Canada	85.1	**18**	59.0	**15**	33.2	**24**	12.5	**28**	14.9	−19	41.0	**−25**	66.8	**−30**	87.5	**−27**
Iceland	75.6	0	48.3	−5	30.9	14	16.7	−13	24.4	−21	51.7	5	69.1	−11	83.3	−19
Denmark	87.4	**21**	62.2	**14**	34.1	**24**	13.5	**4**	12.6	**−9**	37.8	**−26**	65.9	**−17**	86.5	**−9**
Spain	93.4	**25**	77.0	**18**	49.8	**16**	16.8	**14**	6.6	**−16**	23.0	**−21**	50.2	**−24**	83.2	**−23**
Norway	85.3	**−3**	65.4	**−2**	41.7	**5**	15.6	7	14.7	**−8**	34.6	**−21**	58.3	**−13**	84.4	**−15**
Poland	90.9	**0**	76.3	**1**	57.7	**11**	17.9	6	9.1	**−29**	23.7	**−18**	42.3	**−16**	82.1	**−14**
Finland	81.2	**9**	68.8	**10**	44.1	**14**	18.8	−9	18.8	**9**	31.2	**−5**	55.9	**−11**	81.2	**−5**

[a] ESCS = Index of Economic, Social and Cultural Status.
[b] Refers to the percentage of students in each ESCS quartile in underprivileged schools (from all students in the same ESCS quartile in both underprivileged and overprivileged schools).
[c] Differences in student ESCS quartiles' scores have been regressed on the student variables considered here. Values that are statistically significant are indicated in bold (significance at 5% level).
[d] Refers to the percentage of students in each ESCS quartile in overprivileged schools (from all students in the same ESCS quartile in both underprivileged and overprivileged schools).

find explanatory regularities in the asymmetric impact of the composition effect across countries. Thus, the quartiles that are more sensitive to a change in school category differ between countries.

Discussion

Based on the exercise of simulating school scenarios, we can conclude that, in all countries of this study, the nonsegregated scenario (composed of heterogeneous schools) produces more equitable outcomes than the segregated scenario (composed of underprivileged schools and overprivileged schools). However, we have shown how the gains in equality that a move from the segregated scenario to the nonsegregated scenario would bring can be combined with three outcomes in terms of general efficiency: (*a*) worse aggregate results in terms of points obtained by the students – we will call this "reductive equality"; (*b*) better aggregate results in students' performance ("additive equality"); (*c*) insignificant differences between the average results of one scenario and the other ("neutral equality"). In effect, the existence of cases of reductive or additive equality indicates that the logic of the school composition effect is of a nonlinear nature, which has been indicated in other studies.[9]

Comprehensive Models and Equality Patterns

There is an association between the different equality patterns followed by the countries considered and their characterization according to the Mons' typology. As explained above, Mons distinguished three salient comprehensive management models: the comprehensive "à-la-carte integration model" (from now on, ACM; from our sample: Australia, Canada, the United Kingdom, Ireland, New Zealand, and the US), the comprehensive "uniform integration model" (UM: Spain, France, Greece, and Portugal),[10] and the comprehensive "individualized model" (IM: Denmark, Finland, Iceland, Norway, Sweden, and Poland).

The individualized model: A case of reductive equality.—In general terms, the IM countries demonstrate a pattern of reductive equality. This finding is in line with the conclusion reached by Raitano and Vona (2010) that the socioeconomic heterogeneity of a school tends to provoke a slight decrease in efficiency in Scandinavian comprehensive systems. With the exception of Iceland (which fits into the neutral equality pattern), in all IM countries a move from the segregated scenario to the nonsegregated scenario would generate a combination of gains in equality—which are significant although

[9] Benabou (1996); Raitano and Vona (2010); Willms (2010); Andersen and Thomsen (2011).

[10] Italy is considered by Dupriez et al. (2008) as an example of a comprehensive uniform integration system. For the purposes of our study, however, Italy can no longer be considered a comprehensive system, the main reason being that 54.7 percent of its sampled students were in (pre)vocational education at the time of being surveyed by PISA 2009.

moderate (decreases in the regression coefficient of individual ESCS are no more than 25 percent)—with losses in efficiency, which are also moderate. The two countries in which the decrease in efficiency is greater (Norway and Sweden) do not share the same level of gains in equality. While in Norway the gains in equality are low (12 percent), in Sweden this percentage reaches 25 percent.

The pattern of reductive equality is associated with the presence of a convex curve in the relationship between academic results and categories of school composition (from less to more advantaged). In countries where the pattern of reductive equality is accentuated, so too is the convexity in the curve followed by all of the student quartiles together. This pattern is found for Norway, Sweden, and Poland).

It is also worth adding that, among the six IM countries, we do not see regularities in terms of the asymmetric nature of the school composition effect—that is to say, we do not see student quartiles whose greater or lesser sensitivity to the composition effect recurs in the comparison between countries. Nonetheless, as a whole, the general sensitivity of the various student quartiles to the school composition effect is—in the IM countries—lower than in all of the other countries in the sample. This corroborates the results obtained in the multilevel analysis. The percentage of the between-school performance variance that can be attributed to school composition is significantly lower in IM countries than in the other countries under consideration. Conversely, the net effect of the process variables tends to be higher in the IM countries than in the countries subscribing to the other comprehensive models.

The uniform model: A case of additive equality.—The UM countries tend to follow patterns of additive equality. With the exception of Spain (a case of neutral equality), in the other UM countries there are gains in both equality and efficiency that are significantly high and favorable to the nonsegregated scenario (see fig. 4). Two countries (France and Greece) share particularly high gains in efficiency (27 and 26 points, respectively). Also, the nonsegregated scenario presents in France outstanding gains in equality (an increase of 66 percent in the regression coefficient of individual ESCS). The pattern of additive equality is associated with the presence of a concave curve in the relationship between school composition and average scores. The high concentration of more disadvantaged students in the more disadvantaged schools explains why, in the UM countries, the general gains in efficiency that would be generated by a move from a segregated scenario to a nonsegregated scenario are fundamentally a consequence of the significant gains that students in the lower quartiles would experience if moving from underprivileged schools to heterogeneous schools.

We have also shown that, with the exception of Spain, all of the student quartiles in the UM countries are (compared to the other countries) partic-

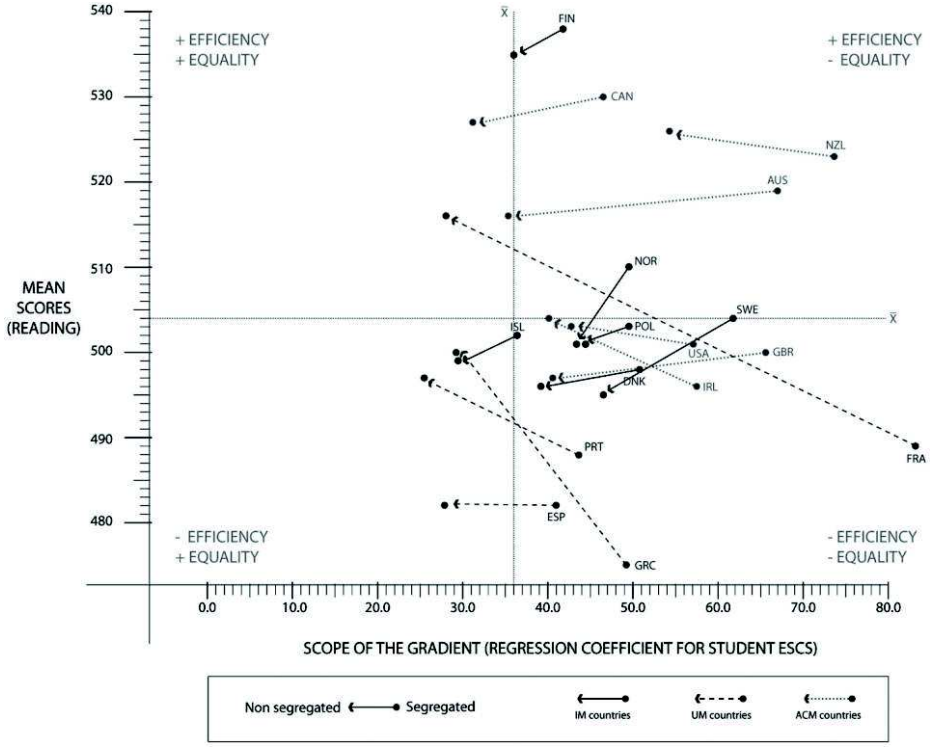

FIG. 4.—Differences in equality and efficiency outcomes between school scenarios, by school comprehensive model. A color version of this figure is available online.

ularly sensitive to the school composition effect. It is important to remember that school-level factors in UM countries contribute most to explaining the total variance in students' results, and school composition (and socioeconomic composition in particular) plays a major role in explaining the between-school variance. In this sense, studies concluding that school composition is a stronger predictor of student performance than variables related to pedagogic practices and organizational processes seem more feasible in the UM countries.[11]

The à-la-carte model: a mixed case.—Finally, of the ACM countries, three follow a pattern of additive equality: Ireland, New Zealand, and the United States. Three other countries follow a pattern of reductive equality—Canada, Australia, and the United Kingdom. In all ACM countries, however, the gains and losses in terms of efficiency are moderate (with the exception of Ireland, where the gains reach 8 points), while the gains in equality find themselves

[11] Coleman et al. (1966); Opdenakker and Van Damme (2001); Dumay and Dupriez (2007, 2008).

halfway between the low intensity of the IM countries and the high intensity of the UM countries. On the basis of the association between the pattern of equality and the type of curve in the relationship between school composition and academic achievement, the cases of Australia (convex curve for all student quartiles and a strong pattern of reductive equality) and the United States (concave curve for all student quartiles and a strong pattern of additive equality) particularly stand out. Regardless, in all ACM countries, and as a result of the distribution of the various quartiles in the different school categories, we see how the more disadvantaged student quartiles tend to see improvements in their results in the nonsegregated scenario, while the more advantaged student quartiles see performance improvements in the segregated scenario.

In general, for the ACM countries, the sensitivity of the various student quartiles to the school composition effect is midway between the sensitivity demonstrated by the student quartiles in the IM and UM countries. As the multilevel models showed, in the ACM countries, the amount of between-school variance that can be attributed to school socioeconomic composition is halfway between the figures for the IM and UM countries, although it is closer to the latter (particularly in the case of the US, the UK, and Australia). In any case, as observed in the IM and UM countries, no general regularities can be identified among the possible asymmetries in the school composition effect.

Beyond Comprehensive Models

From the results presented here, one could deduce that a country's comprehensive is related in some way to the potential costs or benefits of a segregated or nonsegregated scenario. However, we observe that countries included in the same comprehensive model tend to present similarities in terms of other contextual characteristics. We consider here two country variables (see table A5 in the online appendix for country data for both variables): the national "level of school socioeconomic segregation," measured by the *Hutchens index* (see the Methodological Note 2 in the online appendix for details on the construction of this index);[12] and the country mean ESCS.[13] Indeed, countries sharing the same comprehensive model tend to show comparable levels of school socioeconomic segregation and similar average ESCS levels, particularly in the cases of IM and UM countries. Thus, elucidating which of these three factors (comprehensive model, level of school segre-

[12] In fact, one would expect that the level of school segregation in a country might condition its political capacity to extensively tackle those effects and processes associated with the social composition and heterogeneity of the schools. In other words, school segregation limit the effectiveness of educational policies.

[13] This variable, a proxy for the economic and social situation of a country, has proved to be significantly linked to levels of academic achievement and attainment among youths (Schlicht et al. 2010; Alegre and Benito, forthcoming).

gation, and ESCS level)exercises a greater explanatory capacity in terms of the results presented here is a complex task.

Without trying to draw definitive conclusions, we can venture some possible key interpretations through the results observed in the ACM countries. Within the ACM group we have observed the presence of two differentiated equality patterns: three countries demonstrate additive equality (New Zealand, Ireland, and the US) and three demonstrate reductive equality (Canada, Australia, and the UK). This same division is upheld if we consider the average ESCS levels in each country: while the first subgroup (additive equality) presents lower ESCS levels (similar to those of UM countries), the second subgroup (reductive equality) presents levels that tend to be closer to those of the IM countries. It is worth clarifying that the United States (the additive equality country with higher ESCS) and the United Kingdom (the reductive equality country with lower ESCS) present a fairly similar average.

In relation to the indices of school segregation, we see a certain degree of correspondence with the previous division: the ACM additive equality countries tend to show levels of school segregation (general and within the segregated scenario) that are higher than those in the ACM reductive equality countries. This is particularly accentuated in the case of the United States, the ACM country with a higher rate of segregation. From this point of view, it seems that what pushes the United States toward a pattern of additive equality is not its average ESCS (which is evidently higher than in the UM countries) but its high rate of segregation (similar to the UM countries; indeed, among the countries of the sample, it is in the United States where students in the bottom ESCS quartile appear most segregated (see table A5). By contrast, the United Kingdom has a similar ESCS level to the United States, but the United Kingdom has a significantly lower level of school segregation, and so is positioned among the countries demonstrating reductive equality.

In general terms, then, it seems that countries' levels of school socioeconomic segregation and average levels of ESCS are inversely correlated. In this sense, and going beyond the comprehensive model, the following general tendency seems to occur: the greater the average ESCS and the lower the level of school segregation the greater the tendency to follow a pattern of reductive equality. By contrast, the lower the average ESCS and the greater the level of school segregation the greater the tendency to follow a pattern of additive equality. Still, it is worth mentioning one exceptional case: Poland (IM). In effect, Poland presents one of the lowest ESCS averages of the whole sample and higher levels of segregation than those of the other countries in its comprehensive model. Yet in Poland, the performance of the nonsegregated scenario follows the same pattern of reductive equality as the rest of the IM countries. Thus, the case of Poland prevents us from ignoring the

importance of the comprehensive model as a factor with the capacity to influence the patterns of equality considered here.

Conclusion

Before concluding, we should acknowledge two limitations of our data that prevent us from drawing definitive causal inferences. First, PISA's cross-sectional approach, as in the case of many other comparative studies on school composition, does not allow us to control for effects associated with prior achievement levels, either at the individual or the school level. A second drawback derives from the fact that the PISA data set does not allow us to account for within-school segregation. Although the typology of comprehensive models used in this article does consider the extent to which school systems apply policies of ability grouping (by means of setting and streaming) as a mechanism for managing students' social and ability heterogeneity, and despite the fact that this allows us to interpret findings while considering the possible implications of such policies, there is no statistical control that can isolate the part of the school composition effect caused by class composition. In other words, since PISA samples students on a school basis (not on a class basis) we cannot distinguish between the net effect of school composition and the net effect of class composition.

Notwithstanding these caveats, what can we conclude for our analysis? Perhaps that school segregation matters, precisely because the effects of school composition are so evident. Beyond this, we find that the scope of school segregation and the impacts of school composition vary between comprehensive models and between countries, a conclusion which has been reached in other comparative studies.[14] Furthermore, while a hypothetical reduction in school socioeconomic segregation would have significant positive effects on educational equality in all of the countries considered, the impact on levels of educational efficiency in individual countries is not so clear. As shown above, nonsegregated scenarios produce significant gains in efficiency in UM countries and in three ACM countries (Ireland, New Zealand, and the US), while generating moderate losses in IM countries and in Canada, Australia, and the United Kingdom (ACM countries). Such findings have major implications for policies that can potentially affect the distribution or redistribution of students across schools (i.e., school choice and assignment policies, school diversification policies, extension of private schooling, etc.), particularly in the UM countries and in Ireland, New Zealand, and the United States, where a more balanced school intake appears to be beneficial not only in terms of equality but also for the total level of educational efficiency.

We would close by underlining two specific outcomes of this research.

[14] Willms and Somers (2001); Duru-Bellat and Suchaut (2005); Brunello and Checchi (2007); Alegre and Ferrer (2010).

First, we have concluded that the nonlinear patterns of the composition effect observed across countries do not appear to be associated with regular patterns of differential or asymmetric effects. This finding is in line with those country-specific case studies that have found the association between academic achievement and school socioeconomic composition to be similar for all groups of students (Rivkin 2000; Rumberger and Palardy 2005; McConney and Perry 2010). However, we should be cautious in interpreting this finding. On the one hand, we should bear in mind that, in this study, variations in school composition features account only for three categories of school (underprivileged, heterogeneous, and overprivileged). On the other hand, we must consider that both school composition categories and student socioeconomic quartiles are defined on a country-specific basis. Both things considered, it would be perfectly reasonable to expect that asymmetric composition patterns would emerge if cross-country comparisons treated individual socioeconomic background in an absolute sense (comparing average groups with the same social standing) and let student outcomes vary on a continuous form (or on a higher scaled form) of the school composition factor. This argument calls for further research aimed at disentangling the specificities of possible asymmetries in the school composition effect that can remain hidden in the analytical framework utilized here. From a political point of view, this is a crucial question because the outcomes (whether positive or negative) relating to equality and efficiency that can be expected from policy interventions against school segregation depend on how sensitive the various groups of students are expected to be to changes in school composition.

Finally, with regard to the role that contextual factors play as mediators of school segregation effects, we have found an association between comprehensive models and the type of segregation impacts on educational equality and efficiency across countries. We have also called attention to the role that other contextual characteristics, such as the countries' levels of school segregation and socioeconomic status, can play within such an association. In future research, it would be interesting to focus on determining the explanatory power that the comprehensive models—as well as other contextual variables—can have on the type of impact segregation has on educational equality and efficiency. Certainly, further comparative investigation on school segregation and contextual effects on students' and schools' outcomes should draw on explanatory models accounting for a meaningful set of macropolitical and societal variables. This would lead to a better understanding of the outcomes of specific educational policy developments that aim to mitigate the effects of school segregation on educational efficiency and equality.

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Appendix from Benito et al., "School Segregation and Its Effects on Educational Equality and Efficiency in 16 OECD Comprehensive School Systems"

(Comparative Education Review, vol. 58, no. 1, p. 104)

Methodological Note 1: Setting the Segregated Scenario

As explained above, within the segregated scenario, schools in the extremes (under- and overprivileged) are balanced on the basis of their respective mean ESCS deviation from the mean ESCS of the scenario as a whole. More specifically, the weighting procedure is based on the following formula:

$$Y_{ij} = \frac{1 - [(\overline{X}_{\text{escs}_{ijk}} - \overline{x}_{\text{escs}_{ij}}) / (\overline{X}_{\text{escs}_{ijk}} - \overline{x}_{\text{escs}_{ik}}) + (\overline{X}_{\text{escs}_{ijk}} - \overline{x}_{\text{escs}_{ij}})]}{n_{ij}/n_{ijk}},$$

where i refers to students, and j and k refer to the distinct categories of schools within the segregated scenario (i.e., j = overprivileged schools, k = underprivileged schools); Y_{ij} is the weight factor for students enrolled in a selected school category (i.e., overprivileged schools); $\overline{X}_{\text{escs}_{ijk}}$ is the mean ESCS of all students in the segregated scenario; $\overline{x}_{\text{escs}_{ij}}$ is the mean ESCS of students at schools from the selected school category (say, overprivileged schools); $\overline{x}_{\text{escs}_{ik}}$ is the mean ESCS of students at schools from the nonselected school category (say, underprivileged); n_{ij} is the total number of students at schools in the selected category (overprivileged); and n_{ijk} is the total number of students in the segregated scenario.

Methodological Note 2: Hutchens Segregation Index

There are a number of distinct segregation indices that have been used in comparative studies. In this article we use the Hutchens index, a square root index based on the dissimilarity index parameters (Hutchens 2001, 2004).[1] It can be expressed with the following formula:

$$H = \sum_{i=1}^{S} \left| \left(\frac{p_i}{P}\right) - \sqrt{\frac{p_i}{P} \times \frac{r_i}{R}} \right|,$$

where p_i and r_i are, respectively, the number of pupils in the selected group and the rest of the pupils in the school i. P and R are the total number of students in each group (selected group and the rest of the pupils) in all the schools considered in the analysis (for our purpose, the total number of schools in each country). Hutchens index values may be interpreted as the sum of each school's shortfall from the distributional evenness of a specific group of students. We will present the Hutchens indices for the cases of two specific groups: students in the lower ESCS quartile and students in the upper ESCS quartile. Possible values range from 0 (where in every school the proportion of the selected group of students is exactly the same as its total proportion at a regional level) to 1 (maximum level of segregation).

[1] For an interesting discussion of the use and adequacy of school segregation indices, see Allen and Vignoles (2007) and Gorard (2007). For an overview of the advantages of the Hutchens index in comparison to other segregation indices, see Jenkins et al. (2008).

Appendix from Benito et al., Effects of School Segregation on Educational Equality and Efficiency

Table A1. List of Independent Variables Used in the Multilevel Analysis

Name	Type	Values/Definition
Student level:		
Index of Economic, Social, and Cultural Status (ESCS)	Continuous	The PISA ESCS index is composed of individual measures of parental occupational status, family level of education, and home possessions, and it is scaled to have a mean of 0 and a standard deviation of 1 at the student level for all OECD countries. In this article, the ESCS variable has been centered so it scores zero at the country mean.
Gender	Dummy	0 = girls 1 = boys
Immigrant status	Dummy	0 = native + second-generation 1 = first-generation
School level:		
Mean ESCS	Continuous	Derived from the aggregation at the school level of the corresponding individual measures of ESCS. Centered at the country mean.
Proportion of immigrant students	Continuous	0%–100%. Centered at the country mean.
Proportion of male students	Continuous	0%–100%. Centered at the country mean.
School type	Dummy	0 = public 1 = private dependent + private independent
Student-teacher ratio	Continuous	School average number of students per teacher. Centered at the country mean.
Ability grouping	Dummy	Indicates the extent to which schools organize teaching differently for students with different abilities, where: 0 = No ability grouping 1 = Ability grouping
Academic selectivity	Dummy	Indicates the extent to which schools' student admissions are based on students' academic records and on recommendations by feeder schools, where: 0 = No selectivity 1 = Selectivity
School responsibility for curriculum and assessment	Continuous	Scale index measuring the level of autonomy the school has in deciding on course contents and assessment policies, where positive values indicate relatively more responsibility for schools than other authorities. Centered at the country mean.
School responsibility for resource allocation	Continuous	Scale index measuring the level of autonomy the school has in managing teachers and budgets, where positive values indicate relatively more responsibility for schools than the local, regional or national education authorities. Centered at the country mean.
School's educational resources	Continuous	Scale index measuring the principals' perceptions on the adequacy or inadequacy of the school's educational infrastructures, materials and services, where higher values indicate better quality of educational resources. Centered at the country mean.
Teacher shortage	Continuous	Scale index measuring the principals' perceptions on whether the school suffers or not from a lack of qualified teachers in different subjects, where higher values indicate that principals have reported greater teacher shortages at a school. Centered at the country mean.

Table A2. Number of Schools and Students Considered and Excluded per Country

	Students		Schools	
Country	Considered	Excluded[a]	Considered	Excluded[a]
France	4,168	130	155	13
United Kingdom	12,126	53	477	5
Australia	14,151	100	343	10
Sweden	4,460	107	169	20
Ireland	3,857	80	139	5
Greece	4,769	200	152	32
United States	5,164	69	157	8
New Zealand	4,589	54	157	6
Portugal	6,152	146	195	19
Canada	21,429	1,778	782	196
Iceland	3,211	435	77	54
Denmark	5,572	352	254	31
Spain	25,551	336	854	35
Norway	4,534	126	180	17
Poland	4,757	160	164	21
Finland	5,739	71	185	18

[a]Schools for which PISA 2009 provided data for less than 15 students are excluded from the analyses.

Table A3. Multilevel Analysis—Empty Model

	Countries															
	France	UK	Australia	Sweden	Ireland	Greece	US	New Zealand	Portugal	Canada	Iceland	Denmark	Spain	Norway	Poland	Finland
Fixed effects:																
Intercept γ^{00}	494.1***	492.5***	509.9***	496.7***	495.0***	489.6***	496.7***	520.1***	486.7***	517.3***	495.4***	489.0***	483.8***	503.2***	502.1***	533.9***
	(6.6)	(2.3)	(2.6)	(3.2)	(4.2)	(4.4)	(3.9)	(4.0)	(3.6)	(1.5)	(4.1)	(2.3)	(1.5)	(2.5)	(3.0)	(2.1)
Random effects:																
Within-school variance	4,605.6	6,980.5	7,573.2	8,354.4	6,878.8	5,510.9	7,101.4	8,379.0	5,232.8	6,682.5	8,335.4	6,030.0	6,041.4	7,469.3	6,866.7	6,907.9
	(102.8)	(91.2)	(91.1)	(180.4)	(158.2)	(114.7)	(141.9)	(178.0)	(95.9)	(65.2)	(210.4)	(116.3)	(54.2)	(160.1)	(143.5)	(130.9)
Between-school variance	6,666.6	1,805.8	2,102.5	1,372.8	2,233.0	2,763.6	2,092.3	2,193.4	2,350.4	1,399.4	1,088.0	973.1	1,432.8	808.0	1,181.3	532.4
	(777.5)	(151.4)	(180.2)	(184.9)	(296.9)	(337.6)	(262.5)	(281.3)	(262.0)	(90.4)	(224.1)	(122.3)	(88.6)	(117.6)	(165.4)	(81.0)
Variance attributed to school (ρ) (%)	59.1	20.6	21.7	14.1	24.5	33.4	22.8	20.7	31.0	17.3	11.5	13.9	19.2	9.8	14.7	7.2

*$P < .05$.
**$P < .01$.
***$P < .001$.

Table A4. Multilevel Models to Estimate Student and School Variables' Effects on Reading Scores across Countries

Fixed effects	France[a]				United Kingdom				Australia				Sweden				Ireland				Greece			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Student level:																								
Intercept γ^{00}	509.4***	509.4***	509.5***	510.9***	508.6***	550.3***	546.1***	540.6***	531.8***	511.2***	514.1***	532.5***	523.8***	515.8***	516.3***	521.3***	518.8***	481.5***	477.2***	474.3***	508.3***	495.8***	496.5***	504.2***
	(6.0)	(6.0)	(5.5)	(3.9)	(2.0)	(18.0)	(17.7)	(14.7)	(2.1)	(9.2)	(9.0)	(8.0)	(2.7)	(5.7)	(5.7)	(5.1)	(3.4)	(21.5)	(21.6)	(19.0)	(3.9)	(5.1)	(4.8)	(4.3)
Student ESCS	16.3***	16.3***	16.3***	14.7***	32.3***	31.3***	31.3***	27.9***	31.7***	30.9***	30.8***	28.8***	34.7***	34.1***	34.0***	31.8***	31.6***	31.4***	31.3***	29.4***	17.7***	17.5***	17.5***	16.2***
	(1.6)	(1.6)	(1.6)	(1.6)	(1.4)	(1.5)	(1.6)	(1.6)	(1.3)	(1.3)	(1.3)	(1.3)	(1.7)	(1.9)	(1.9)	(1.9)	(1.7)	(2.1)	(2.1)	(2.2)	(1.3)	(1.4)	(1.4)	(1.4)
Gender	−26.7***	−26.7***	−26.3***	−26.1***	−24.1***	−23.7***	−23.6***	−23.5***	−35.2***	−35.3***	−35.3***	−35.3***	−44.9***	−45.1***	−45.2***	−45.2***	−35.0***	−40.3***	−37.9***	−38.0***	−35.4***	−34.3***	−33.6***	−33.4***
	(2.5)	(2.5)	(2.5)	(2.4)	(2.2)	(2.3)	(2.3)	(2.3)	(1.8)	(1.8)	(1.8)	(1.8)	(2.7)	(3.0)	(3.0)	(2.9)	(3.5)	(4.6)	(5.1)	(5.0)	(2.4)	(2.4)	(2.4)	(2.4)
Immigrant status	−14.4	−14.4	−13.1	−13.5	−19.2**	−21.5**	−19.5*	−18.5*	−7.9**	−8.2**	−9.2**	9.2**	−56.4***	−54.6***	−53.1***	−54.6***	−34.3***	−25.2***	−24.9***	−24.8**	−18.9**	−16.7**	−14.5*	−15.2*
	(7.8)	(7.8)	(7.8)	(7.9)	(6.5)	(7.2)	(7.2)	(7.1)	(2.9)	(3.0)	(3.0)	(3.0)	(7.4)	(7.9)	(8.0)	(7.9)	(6.3)	(7.0)	(7.1)	(6.9)	(5.7)	(6.0)	(6.1)	(6.1)
School level:																								
School type		...	...	...		37.5**	40.0***	−25.1		21.1***	23.4***	4.5		−3.0	−1.9	−18.6		21.3*	20.0*	15.5		−2.6	−2.9	−27.5
						(11.6)	(11.5)	(10.2)		(4.9)	(4.8)	(4.4)		(10.3)	(10.3)	(9.3)		(9.3)	(9.3)	(8.3)		(17.9)	(16.7)	(15.0)
Student-teacher ratio		...	...	...		.3	.0	−1.3		.6	.5	.3		.7	.6	.2		5.9*	6.1*	1.1		7.3***	5.5**	3.8*
						(.8)	(.8)	(.7)		(.9)	(.9)	(.8)		(.8)	(.8)	(.7)		(2.5)	(2.6)	(2.4)		(1.7)	(1.6)	(1.4)
Responsibility curriculum and ssment		...	...	...		.3	.5	.9		−5.5**	−5.8**	−4.1*		1.5	1.3	4.1		−2.9	−3.1	−3.1		−9.5	−7.2	−9.9
						(2.4)	(2.4)	(2.0)		(2.1)	(2.1)	(1.8)		(2.9)	(2.9)	(2.6)		(4.9)	(4.9)	(4.3)		(14.8)	(13.9)	(12.0)
Responsibility resource allocation		...	...	...		.3	1.0	1.1		5.5*	4.9	−2.0		7.3*	6.7*	4.0		−3.6	−5.0	−21.7		103.1*	84.8	42.7
						(2.0)	(2.0)	(1.6)		(2.7)	(2.6)	(2.3)		(2.9)	(2.9)	(2.6)		(20.1)	(20.1)	(18.0)		(47.6)	(44.6)	(39.1)
Educational resources		...	...	...		.7	−.1	1.5		.1	−.2	−1.6		12.4**	11.5**	8.7**		.2	.2	−3.2		2.3	1.1	.6
						(2.0)	(2.0)	(1.6)		(2.1)	(2.0)	(1.7)		(3.6)	(3.7)	(3.2)		(3.6)	(3.6)	(3.2)		(4.4)	(4.2)	(3.6)
Teacher shortage		...	...	...		−2.5	−1.7	−.9*		−7.4***	−7.2***	−4.3*		3.9	4.9	4.6		−.2	1.0	4.7		−1.3	−1.3	2.4
						(2.3)	(2.2)	(1.8)		(2.2)	(2.2)	(1.9)		(4.5)	(4.5)	(3.9)		(4.7)	(4.8)	(4.3)		(4.5)	(4.2)	(3.7)
Ability grouping		...	...	...		−46.9**	−43.9*	−32.7		10.9	10.5	2.6		11.6	10.6	8.0		23.5	26.1	32.5		20.3	19.9	16.6
						(17.8)	(17.5)	(14.6)		(8.5)	(8.4)	(7.3)		(6.4)	(6.4)	(5.6)		(20.9)	(20.8)	(18.3)		(11.5)	(10.7)	(9.3)
Academic selectivity		...	...	...		8.3	7.7	5.9		3.5	.2	−2.8		−1.2	.2	−6.2		2.8	4.8	4.8		18.3*	14.1*	3.9
						(4.2)	(4.1)	(3.3)		(4.6)	(4.6)	(4.0)		(7.0)	(7.1)	(6.2)		(7.5)	(7.7)	(6.8)		(7.2)	(6.8)	(6.1)
% boys			−1.3**	−1.2***			.0	−.1			.0	.0			.1	−.1			−.1	−.2			−1.2***	−1.0***
			(.4)	(.3)			(.1)	(.1)			(.1)	(.1)			(.4)	(.3)			(.1)	(.1)			(.3)	(.3)
% immigrants			−3.2***	.1			−1.2***	−.5*			.7***	.4*			−.6	.3			−.3	.1			−.5	.1
			(.8)	(.7)			(.3)	(.2)			(.2)	(.2)			(.5)	(.4)			(.6)	(.5)			(.4)	(.3)
Mean ESCS				111.2***				72.6***				61.9***				56.6***				52.6***				51.5***
				(8.8)				(4.9)				(5.6)				(8.4)				(9.8)				(7.3)
Random effects:																								
Within-school variance	4,154.1	...	4,145.3	4,151.8	5,884.4	5,555.5	5,555.6	5,548.2	6,617.7	6,592.7	6,594.1	6,595.5	6,651.7	6,598.9	6,597.5	6,610.5	5,977.1	6,147.5	6,147.6	6,151.5	4,918.7	4,899.5	4,899.0	4,893.4
	(97.3)		(97.3)	(97.1)	(80.2)	(80.6)	(80.6)	(80.3)	(82.8)	(83.8)	(83.9)	(83.8)	(150.0)	(165.3)	(165.3)	(166.2)	(145.5)	(179.6)	(179.5)	(180.6)	(106.0)	(108.9)	(108.9)	(108.8)
Between-school variance	,5,228.2	...	4,347.8	2,023.6	916.3	890.6	818.6	403.4	1,053.6	791.9	751.4	490.8	698.7	640.0	629.3	414.2	987.3	894.8	880.8	623.6	1,924.5	1,500.7	1,275.0	899.8
	(625.8)		(524.5)	(256.1)	(94.9)	(99.8)	(95.0)	(56.1)	(106.6)	(84.6)	(81.2)	(58.0)	(113.9)	(118.7)	(117.2)	(87.7)	(161.9)	(184.1)	(180.8)	(139.2)	(249.5)	(207.5)	(179.5)	(132.9)
Within-school variance explained (%)	9.8	...	9.8	9.9	15.7	20.4	20.4	20.5	12.6	12.9	12.9	12.9	20.4	21.0	21.0	20.9	13.1	10.6	10.6	10.6	10.7	11.1	11.1	11.2
Between-school variance explained (%)	21.6	...	34.8	69.6	49.3	50.7	54.7	77.7	49.9	62.3	64.3	76.7	49.1	53.4	54.2	69.8	55.8	59.9	60.6	72.1	30.4	45.7	53.9	67.4
Student level:																								
Intercept γ^{00}	513.8***	501.7***	502.8***	510.5***	549.1***	579.4***	579.0***	586.3***	505.5***	509.8***	509.5***	509.4***	538.1***	429.2***	531.7***	538.1***	522.4***	521.1***	523.7***	528.3***				
	(3.2)	(8.7)	(8.9)	(7.2)	(2.9)	(19.8)	(19.9)	(17.1)	(3.0)	(4.4)	(3.9)	(3.1)	(1.4)	(4.2)	(4.1)	(4.0)	(3.7)	(7.6)	(7.5)	(7.2)				
Student ESCS	29.4***	29.2***	29.2***	26.6***	43.0***	41.9***	42.0***	38.7***	19.3***	19.3***	19.5***	17.9***	23.9***	23.1***	23.1***	21.6***	24.6***	23.7***	23.6***	22.6***				
	(1.6)	(1.7)	(1.7)	(1.7)	(1.8)	(1.9)	(1.9)	(2.0)	(1.0)	(1.0)	(.9)	(1.0)	(.9)	(1.0)	(1.0)	(1.0)	(1.9)	(2.1)	(2.1)	(2.1)				
Gender	−29.4***	−30.8***	−30.8***	−30.9***	−46.2***	−42.9***	−43.8***	−43.8***	−32.9***	−32.9***	−32.2***	−32.2***	−33.6***	−33.6***	−33.0***	−33.0***	−45.2***	−44.0***	−44.1***	−43.7***				
	(2.3)	(2.5)	(2.5)	(2.6)	(3.5)	(3.4)	(3.6)	(3.5)	(2.0)	(2.1)	(2.1)	(2.0)	(1.4)	(1.5)	(1.5)	(1.5)	(3.6)	(4.4)	(4.3)	(4.3)				
Immigrant status	−.1	−.6	−.9	−2.4	−13.0***	−14.6***	−14.2**	−13.8**	−23.6***	−23.8***	−22.7***	−22.7**	−10.8***	−9.2**	−10.4**	−10.6**	−56.7***	−56.8***	−53.3**	−53.5**				
	(5.4)	(5.8)	(5.9)		(3.8)	(4.2)	(4.2)		(5.9)	(6.0)			(3.1)	(3.2)	(3.2)		(12.9)	(15.1)						
				(5.6)				(4.2)			(6.0)	(6.0)				(3.2)			(14.8)	(14.8)				
School level:																								
School type		33.6*	30.2	−.7		28.6*	29.0*	−5.9		−10.4	−6.4	−1.6		36.4***	37.5***	23.2**		...	...	...				
		(14.7)	(17.4)	(14.2)		(13.0)	(13.1)	(12.3)		(17.7)	(15.6)	(12.2)		(7.4)	(7.2)	(7.0)								
Student-teacher ratio		−.7	−.8	−.6		4.3***	4.5***	3.5**		4.4**	4.1**	.8		2.0***	1.9***	1.5***		−3.0	−4.2	−5.2*				
		(.6)	(.6)	(.5)		(1.1)	(1.1)	(1.0)		(1.7)	(1.5)	(1.2)		(.4)	(.3)	(.3)		(2.1)	(2.1)	(2.0)				

Responsibility curriculum and assessment		−.3	−.2	−1.6		−.2	−.2	−.6		3.8	−.9	−2.1		−.6	−1.0	.4		7.5	8.5*	7.4
		(3.7)	(3.7)	(3.0)		(3.1)	(3.1)	(2.7)		(11.3)	(10.0)	(7.8)		(2.6)	(2.5)	(2.4)		(4.0)	(3.9)	(3.7)
Responsibility resource allocation		.9	1.2	1.8		−.3	−.1	.5		.2	2.6	2.8		4.1	3.3	−.3		1.6	−.8	3.5
		(3.7)	(3.8)	(3.0)		(4.0)	(4.0)	(3.5)		(7.1)	(6.2)	(4.8)		(3.3)	(3.2)	(3.0)		(7.8)	(7.7)	(7.4)
Educational resources		2.5	2.2	.1		3.8	4.0	4.3		2.8	2.2	−.6		−1.3	−1.4	−1.5		3.7	−.6	.4
		(2.9)	(2.9)	(2.4)		(2.9)	(3.0)	(2.5)		(3.9)	(3.5)	(2.8)		(1.5)	(1.5)	(1.4)		(7.7)	(5.1)	(4.8)
Teacher shortage		−11.1**	−11.1**	−4.5		−4.6	−5.0	−2.8		3.0	4.1	9.1*		−5.5**	−4.6**	−3.2*		−.4	−.2	3.8
		(3.6)	(3.6)			(3.0)	(3.1)							(1.7)	(1.6)					
				(3.0)				(2.7)		(5.7)	(5.0)	(4.0)				(1.6)		(4.9)	(4.8)	(4.6)
Ability grouping		15.0	14.5	7.7		−25.9	−25.0	−32.7		−11.4	−8.4	−5.1		2.5	1.8	−1.4		3.7	.7	−2.4
		(9.3)	(9.4)	(7.5)		(19.5)	(19.6)	(16.8)		(5.9)	(5.2)	(4.1)		(4.0)	(4.0)	(3.8)		(7.7)	(7.6)	(7.2)
Academic selectivity		−5.4	−6.1	−3.9		−8.9	−9.3	−5.8		10.0	5.3	−.2		7.6*	6.4*	3.7		−13.9	−13.0	−14.3
		(5.9)	(6.0)			(5.0)	(5.0)							(2.9)	(2.9)			(7.4)		
				(4.8)				(4.4)		(6.5)	(5.8)	(4.5)				(2.8)			(7.2)	(6.7)
% boys			.2	.2			.0	.1			−1.8***	−1.4***			−.4***	−.4**			.8	.7
			(.4)	(.3)			(.1)	(.1)			(.3)	(.2)			(.1)	(.1)			(.5)	(.5)
% immigrants			.2 (.3)	.7			−.1 (.2)	−.2			−1.6**	−1.9**			.5*** (.1)	.3** (.1)			−1.6*	−.9
				(.3)				(.2)			(.6)	(.5)							(.8)	(.8)
Mean ESCS				50.4***				46.8***				38.8***				35.1***				30.7**
				(5.6)				(6.4)				(3.5)				(3.8)				(10.8)
Random effects:																				
Within-school variance	6,313.9	6,310.6	6,311.0	6,310.6	6,986.0	6,919.9	6,921.4	6,928.9	4,483.9	4,552.5	4,553.7	4,548.4	5,711.5	5,698.7	5,697.6	5,699.5	7,167.9	7,033.5	7,036.8	7,042.5
	(132.2)	(140.9)	(140.9)	(140.3)	(153.0)	(161.7)	(161.8)	(162.1)	(85.4)	(88.2)	(88.2)	(87.9)	(58.4)	(60.7)	(60.7)	(60.7)	(185.7)	(205.9)	(206.0)	(206.3)
Between-school variance	1,119	822.4	817.0	428.6	654.3	413.1	418.1	244.0	1,350.9	1,192.1	868.8	449.9	856.8	709.2	661.9	551.5	662.5	309.2	274.8	213.0
	(160.9)	(135.1)	(134.8)	(85.6)	(140.2)	(107.3)	(107.7)	(80.5)	(167.2)	(151.5)	(116.4)	(69.2)	(65.7)	(58.1)	(55.6)	(49.1)	(162.1)	(121.6)	(110.6)	(98.6)
Within-school variance explained (%)	11.1	11.1	11.1	11.1	16.6	17.4	17.4	17.3	14.3	13.0	13.0	13.1	14.5	14.7	14.7	14.7	14.0	15.6	15.6	15.5
Between-school variance explained (%)	46.5	60.7	60.9	79.5	70.2	81.2	80.9	88.9	42.5	49.3	63.0	80.9	38.8	49.3	52.7	60.6	39.1	71.6	74.7	80.4
Student level:																				
Intercept γ^{00}	510.9***	509.9***	509.8***	511.3***	502.6***	505.5***	504.9***	505.9***	530.4***	535.3***	535.4***	535.4***	527.1***	519.3***	519.3***	524.1***	562.0***	563.7***	563.7***	563.7***
	(1.9)	(2.9)	(2.9)	(2.8)	(1.3)	(2.7)	(2.7)	(2.6)	(2.4)	(4.6)	(4.6)	(4.5)	(2.3)	(3.8)	(3.7)	(4.0)	(2.0)	(3.4)	(3.4)	(3,4)
Student ESCS	31.5***	30.8***	30.6***	28.4***	21.9***	21.4***	21.4***	20.1***	33.8***	33.6***	33.6***	32.5***	35.4***	34.4***	34.2***	33.3***	27.8***	27.4***	27.4***	27.3***
	(1.4)	(1.4)	(1.4)	(1.4)	(.7)	(.7)	(.7)	(.7)	(1.9)	(2.0)	(2.0)	(2.0)	(1.5)	(1.5)	(1.5)	(1.6)	(1.2)	(1.5)	(1.5)	(1.5)
Gender	−29.5***	−29.0***	−28.9***	−28.6***	−27.8***	−27.5***	−27.2***	−27.2***	−48.7***	−48.7***	−48.6***	−48.5***	−48.7***	−49.0***	−48.2***	−48.2***	−53.7***	−53.9***	−53.8***	−53.8***
	(2.3)	(2.4)	(2.4)	(2.4)	(1.2)	(1.3)	(1.3)	(1.3)	(2.5)	(2.7)	(2.7)	(2.7)	(2.4)	(2.4)	(2.4)	(2.3)	(2.3)	(2.3)	(2.3)	(2.3)
Immigrant status	−48.4***	−46.6***	−44.1***	−45.1***	−48.1***	−47.3***	−47.6***	−48.1***	−35.4***	−37.9***	−38.1***	−38.7***	...	...	...	...	−66.7***	−68.2***	−67.0***	−67.1***
	(6.1)	(6.3)	(6.3)	(6.3)	(2.7)	(2.9)	(2.9)	(2.9)	(7.4)	(7.6)	(7.7)	(7.7)					(12.9)	(12.8)	(12.8)	(12.8)
School level:																				
School type		11.7*	9.2	2.7		6.3	6.8	1.8		−23.9	−24.6	−17.7		24.5	24.5	6.9		−12.1	−11.2	−11.0
		(5.0)	(5.1)	(4.9)		(4.8)	(4.8)	(4.5)		(20.7)	(20.8)	(20.6)		(18.9)	(18.3)	(19.1)		(12.1)	(12.0)	(12.1)
Student-teacher ratio		3.7***	3.3***	2.0**		1.4***	1.4***	.7		.4	.4	.0		.0	.1	.0		1.8	1.9	1.9
		(.7)	(.7)	(.7)		(.4)	(.4)	(.4)		(1.0)	(1.0)	(1.0)		(.8)	(.8)	(.8)		(1.0)	(1.0)	(1.0)
Responsibility curriculum and assessment:		4.1*	3.7*	2.3		2.0	1.8	1.3		1.3	1.3	1.5		−1.6	−1.2	−1.2		1.4	1.2	1.2
		(1.8)	(1.8)	(1.7)		(1.8)	(1.8)	(1.7)		(3.2)	(3.2)	(3.1)		(2.5)	(2.4)	(2.4)		(2.2)	(2.2)	(2.2)
Responsibility resource allocation		.5	.6	−.1		3.5	4.3	.7		2.0	1.8	−.5		.1	.6	1.1		6.2	6.2	6.0
		(2.1)	(2.1)	(2.0)		(3.2)	(3.2)	(3.0)		(4.0)	(4.0)	(3.9)		(6.5)	(6.3)	(6.2)		(5.4)	(5.3)	(5.4)
Educational resources		−2.7	−2.7	−2.6		1.1	1.3	1.4		5.0	5.0	4.7		−3.0	−2.7	−3.1		4.6	5.0	5.0
		(2.4)	(2.4)	(2.2)		(1.6)	(1.5)	(1.5)		(3.4)	(3.5)	(3.4)		(2.5)	(2.4)	(2.4)		(2.5)	(2.5)	(2.5)
Teacher shortage		−7.2*	−7.6**	−5.1		−1.7	−1.4	−1.2		−5.8	−5.9	−3.7		−2.1	−1.8	−2.3		−10.2***	−10.7**	−10.7***
		(2.8)	(2.8)	(2.7)		(2.2)	(2.2)	(2.1)		(3.2)	(3.2)	(3.3)		(4.5)	(4.3)	(4.3)		(3.0)	(3.0)	(3.0)
Ability grouping		−1.7	−1.1	−.4		−5.6*	−5.4*	−3.4		−7.6	−7.7	−7.6		9.7*	9.9*	5.4		−2.5	−2.4	−2.3
		(3.4)	(3.3)	(3.2)		(2.5)	(2.5)	(2.4)		(4.9)	(4.9)	(4.8)		(4.3)	(4.1)	(4.4)		(3.8)	(3.7)	(3.7)
Academic selectivity		.6	1.8	2.0		−1.8	−1.8	−4.7		4.1	3.6	3.6		3.6	2.8	−1.0		5.4	5.2	5.0
		(3.4)	(3.4)	(3.3)		(3.0)	(3.0)	(2.8)		(4.8)	(4.9)	(4.8)		(4.6)	(4.4)	(4.5)		(4.1)	(4.1)	(4.2)
% boys			.0	−.1			−.3**	−.3*			−.2	−.1			−1.0***	−.9**			−.2	−.2
			(.2)	(.1)			(.1)	(.1)			(.3)	(.3)			(.2)	(.2)			(.3)	(.3)
% immigrants			−.8*	−.2			.3*	.3*			.1	.3			3.6	1.3			−.9	−.9
			(.3)	(.3)			(.1)	(.1)			(.5)	(.5)			(4.9)	(4.9)			(.7)	(.7)

Mean ESCS				30.5*** (4.8)				27.2*** (2.7)				25.5** (8.8)				16.0** (5.9)				1.9 (6.5)
Random effects:																				
Within-school variance	5,062.4 (102.7)	5,065.8 (106.3)	5,062.2 (106.2)	5,053.8 (105.8)	4,932.2 (45.7)	4,806.6 (48.2)	4,806.8 (48.2)	4,804.0 (48.2)	6,109.4 (136.7)	6,160.9 (143.7)	6,161.3 (143.7)	6,157.1 (143.6)	5,414.7 (117.1)	5,431.8 (118.4)	5,429.1 (118.3)	5,432.4 (118.4)	5,486.1 (107.5)	5,494.2 (109.8)	5,494.5 (109.8)	5,495.0 (109.8)
Between-school variance	369.2 (62.6)	267.2 (53.1)	256.7 (52.1)	201.1 (44.5)	792.5 (57.6)	684.3 (54.6)	671.5 (53.9)	558.3 (46.4)	520.4 (89.6)	420.3 (82.4)	417.9 (82.2)	385.4 (78.2)	476.5 (82.4)	423.4 (75.7)	367.7 (68.6)	345.2 (65.5)	359.1 (65.2)	326.0 (59.8)	315.7 (58.9)	315.0 (58.8)
Within-school variance explained (%)	16.0	16.0	16.1	16.2	18.4	20.4	20.4	20.5	18.2	17.5	17.5	17.6	21.1	20.9	20.9	20.9	20.6	20.5	20.5	20.5
Between-school variance explained (%)	62.1	72.5	73.6	79.3	44.7	52.2	53.1	61.0	35.6	48.0	48.3	52.3	59.7	64.2	68.9	70.8	32.6	38.8	40.7	40.8

*$P < .05$.

**$P < .01$.

***$P < .001$.

[a]School process figures for France are not shown, given that this country does not provide information regarding the characteristics of its schools.

Table A5. School Segregation Level and Mean ESCS of the Countries under Consideration

Comprehensive Models (Mons 2007; Dupriez et al. 2008)	School Socioeconomic Segregation (Hutchens Index) PISA 2009						ESCS Average PISA 2009				
	ESCS Quartile 1			ESCS Quartile 4			ESCS Quartile 1	ESCS Quartile 2	ESCS Quartile 3	ESCS Quartile 4	Total
	Country	Segregated Scenario	Nonsegregated Scenario	Country	Segregated Scenario	Nonsegregated Scenario					
Individualized model (IM):											
Denmark	.120	.225	.047	.106	.180	.044	−.82	.01	.62	1.39	.31
Finland	.067	.130	.029	.077	.140	.024	−.64	.12	.69	1.32	.37
Iceland	.068	.114	.016	.069	.088	.032	−.44	.45	1.09	1.80	.77
Norway	.071	.174	.031	.070	.152	.028	−.47	.23	.73	1.40	.48
Poland	.110	.166	.043	.138	.251	.023	−1.28	−.65	−.15	.97	−.29
Sweden	.095	.197	.028	.092	.182	.027	−.72	.08	.63	1.32	.32
Uniform model (UM):											
Spain	.150	.231	.034	.179	.266	.036	−1.68	−.74	.03	1.14	−.31
France	.160	.248	.032	.177	.273	.032	−1.20	−.42	.15	.94	−.12
Greece	.130	.227	.030	.146	.228	.036	−1.23	−.39	.33	1.28	.05
Portugal	.128	.202	.025	.184	.298	.032	−1.70	−.87	−.05	1.35	−.29
À-la-carte model (ACM):											
Australia	.126	.185	.020	.131	.191	.023	−.63	.09	.63	1.29	.35
Canada	.120	.214	.034	.108	.192	.040	−.58	.25	.83	1.53	.52
United Kingdom	.117	.192	.034	.138	.222	.041	−.80	−.06	.47	1.21	.20
Ireland	.124	.236	.025	.147	.275	.032	−1.01	−.26	.32	1.15	.05
New Zealand	.131	.234	.028	.137	.218	.044	−.92	−.17	.36	1.08	.09
United States	.163	.234	.031	.173	.244	.034	−1.05	−.11	.52	1.31	.16

Table A6. Figures of the Segregated Scenario, Unweighted and Weighted

Country	General			Segregated Scenario (unweighted)		Segregated Scenario (weighted)	
	Overprivileged Schools	Heterogeneous Schools	Underprivileged Schools	Overprivileged Schools	Underprivileged Schools	Overprivileged Schools	Underprivileged Schools
France	29.2	43.8	27.0	52	48.0	51.1	48.9
United Kingdom	27.0	50.0	23.1	53.9	46.1	52.5	47.5
Australia	33.6	37.9	28.5	54.1	45.9	53.5	46.5
Sweden	20.4	60.9	18.7	52.1	47.9	53.8	46.2
Ireland	24.5	55.3	20.2	54.9	45.1	55.8	44.2
Greece	21.3	49.5	29.2	42.1	57.9	47.3	52.7
United States	32.7	38.2	29.1	53.0	47.0	65.6	34.4
New Zealand	24.0	50.0	26.0	47.9	52.1	50.6	49.4
Portugal	30.8	45.3	23.9	56.4	43.6	57.4	42.6
Canada	18.7	59.1	22.2	45.8	54.2	47.2	52.8
Iceland	17.4	47.1	35.5	32.9	67.1	42.0	58.0
Denmark	18.6	59.4	22.0	45.9	54.1	49.4	50.6
Spain	31.6	43.9	24.5	56.4	43.6	58.9	41.1
Norway	11.8	71.6	16.5	41.8	58.2	51.5	48.5
Poland	30.1	51.1	18.8	61.6	38.4	61.0	39.0
Finland	16.0	62.4	21.7	42.4	57.6	53.4	46.6

Publicació D

Títol: ¿Puede el efecto composición reducir las desigualdades educativas? Una mirada sobre los efectos de la segregación escolar en España y los países del modelo de integración uniforme.

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¿PUEDE EL EFECTO COMPOSICIÓN REDUCIR LAS DESIGUALDADES EDUCATIVAS? UNA MIRADA SOBRE LOS EFECTOS DE LA SEGREGACIÓN ESCOLAR EN ESPAÑA Y LOS PAÍSES DEL MODELO DE INTEGRACIÓN UNIFORME [15]

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Introducción

En las últimas décadas, numerosas investigaciones a nivel internacional han señalado que, al margen del peso de las características individuales y familiares, las características agregadas de los alumnos de los centros educativos tienen un efecto adicional sobre el rendimiento académico individual: es el llamado *efecto composición*. Ciertamente, no existe unanimidad sobre las dimensiones ni sobre los factores explicativos de tal efecto (Nash, 2003; Thrupp, Lauder y Robinson, 2002). De hecho, hay algunas investigaciones que han puesto en cuestión su existencia (Teddlie, Stringfield y Reynolds, 2000; Marks, McMillan y Hillman, 2001), pero la mayoría de estudios realizados en los últimos años han aportado evidencias empíricas contrastadas sobre la incidencia de diferentes variables de composición escolar sobre los resultados académicos.

Entre estas investigaciones, encontramos un buen número que se refieren al peso del estatus socioeconómico o el nivel educativo de las familias del centro sobre el rendimiento y los resultados escolares individuales (Caldas y Bankston, 1997; Lauder *et al*, 2007; Alegre y Arnett, 2007; Van Ewijk y Sleegers, 2010a). Otras investigaciones han puesto de relieve los efectos de la "composición académica", es decir, de las habilidades o competencias del alumnado de los centros (Dar y Resh, 1986, 1992; Luyten y Van der Hoeven-van Doornum, 1995; Opdenakker y Van Damme, 2001; De Fraine *et al*, 2003). Otros estudios, que han tenido en consideración tanto la composición social (según estatus

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socioeconómico) como la composición académica de los centros, han detectado que la composición social explica una parte superior de la varianza de resultados que la composición académica (Lauder *et al*, 2007). Por otra parte, hay investigadores que han destacado la incidencia sobre los resultados académicos de la densidad de alumnos de origen inmigrante de los centros (Hanushek, Kain y Rivkin, 2002; Dronkers y Levels, 2006), y algunos estudios recientes han circunscrito su efecto a países y perfiles de alumnos específicos, destacando además que tales efectos son modestos (Van Ewijk y Sleegers, 2010b).

Algunas investigaciones sobre el efecto composición han contrastado el peso de la composición social de los centros con el peso de variables referentes a sus prácticas pedagógicas y organizativas (el llamado *efecto proceso*). Mientras sí se detecta un efecto estadístico conjunto de algunas variables de composición y algunas variables de proceso sobre los resultados obtenidos por los alumnos (Dumay y Dupriez, 2007), los efectos netos de la mayor parte de las variables de proceso escolar tomadas en consideración parecen más bien escasos (Dupriez *et al*, 2008).

En el caso específico de España, en los últimos años diferentes investigaciones han puesto de relieve el peso de la composición social de los centros en base a la muestra española de los datos PISA. El análisis estadístico realizado por Calero *et al* (2007) a partir de los datos PISA 2003, indica que tanto una mayor proporción de chicas como una media más elevada de años de escolarización de los padres del centro tienen un impacto positivo sobre el rendimiento de los alumnos en matemáticas. Asimismo, un porcentaje superior al 10% de alumnos de origen inmigrante tiene un impacto negativo.

Mediante un análisis de los datos PISA 2006 de España, Calero y Waisgrais (2009) corroboran para el caso de las puntuaciones en ciencias el peso del porcentaje de chicas, del nivel educativo de los padres y de la densidad de alumnos inmigrantes de los centros en el resultado agregado de los alumnos. A diferencia de los datos PISA 2003, en este caso los efectos negativos de la presencia de alumnos de origen inmigrante se producen a partir de una densidad más elevada; concretamente a partir de una presencia superior al 20%.

Marí-Klose *et al* (2009) también han puesto de relieve el peso de la composición social en las pruebas PISA 2006 de España, a la vez que destacaban la escasa incidencia de variables "de proceso", tales como los recursos humanos o los recursos materiales de los centros. A nuestro entender, estos resultados no son lo suficientemente contundentes para despreciar la potencial incidencia de algunas variables de proceso pedagógico y organizativo, debido a que los estudios de naturaleza cuantitativa presentan dificultades significativas para medir con precisión tales procesos. Ahora bien, el corpus de estudios que, tanto a nivel internacional como a nivel estatal, vienen poniendo de relieve de forma sistemática el peso del efecto composición, contribuye a situar la segregación escolar como un factor de desigualdad educativa relevante y, a la vez, como un elemento sobre el que potencialmente se pudiera intervenir desde la política educativa.

Es por ello que en este artículo nos proponemos dar un paso más en el análisis del efecto composición con el fin de explorar los efectos agregados de la composición social de las escuelas, es decir, los efectos de la segregación escolar sobre los resultados escolares del conjunto de alumnos. El objetivo último no es otro que indagar en el impacto que una potencial reducción (o un potencial aumento) de los niveles de segregación escolar pudiera

tener tanto sobre los resultados académicos globales del sistema educativo español (así como de otros sistemas educativos similares), como sobre la equidad del sistema. Para cumplir tal objetivo, presentamos un ejercicio de simulación estadística basado en la creación de dos escenarios hipotéticos: un escenario segregado y un escenario no segregado.

Metodología

Los análisis estadísticos que aquí se presentan están elaborados en base a los datos PISA 2009. El objeto de atención principal es el sistema educativo español, si bien para contextualizar sus resultados también se toman en consideración los países con un modelo de comprensividad parecido al del sistema educativo español según la tipología propuesta por Mons (2007) y afinada por Dupriez *et al* (2008). Tal tipología se ha establecido a partir de los criterios de selección de los alumnos en itinerarios formativos diferenciados y del tipo de abordaje pedagógico de la diversidad en el rendimiento de los alumnos. En base a estos criterios, España forma parte del modelo de *integración uniforme,* juntamente con Grecia, Portugal y Francia[18]. Dicho modelo se caracteriza por su comprensividad durante la educación secundaria obligatoria, por abordar preferentemente la heterogeneidad del rendimiento de los estudiantes mediante su agrupación por niveles de habilidad, y por recurrir a la repetición del curso como medida paliativa en aquellos alumnos que no logran alcanzar los objetivos predeterminados.

En el caso de España, los diferentes procedimientos estadísticos se han aplicado a las puntuaciones obtenidas por los alumnos en los tres ámbitos de competencias de PISA: lectura, matemáticas y ciencias. El objetivo es conseguir una fotografía lo más detallada y precisa posible del país. En cambio, la comparativa con el resto de países ha pivotado exclusivamente sobre las puntuaciones en lectura, ámbito de competencias que ha sido objeto de atención prioritaria en PISA 2009.

Antes de adentrarnos en la realización del ejercicio de simulación, hemos procedido a calcular diferentes modelos de análisis multinivel con el objetivo de contrastar el peso del efecto de la composición social de los centros sobre las puntuaciones individuales de los alumnos. Para la configuración de tales modelos se han considerado variables independientes relativas tanto a las características de los alumnos como a las características de los centros. En relación a los centros, se han tomado tanto variables referentes a su estructura organizativa y pedagógica (variables de *proceso*) como variables referentes al perfil de su alumnado (variables de *composición*). En la Tabla I se detallan las características del conjunto de variables independientes incorporadas a los modelos multinivel.

[18] En la tipología propuesta por Mons (2007) y afinada por Dupriez *et al* (2008) también se incluye a Italia en el modelo de *integración uniforme*, pero hemos optado por descartarlo porque no comparte una categoría esencial para posibilitar la comparación que establecemos: la comprensividad del modelo pasados los 15 años (es decir, más allá del momento en el cual se administra la prueba PISA a los alumnos de todos los países).

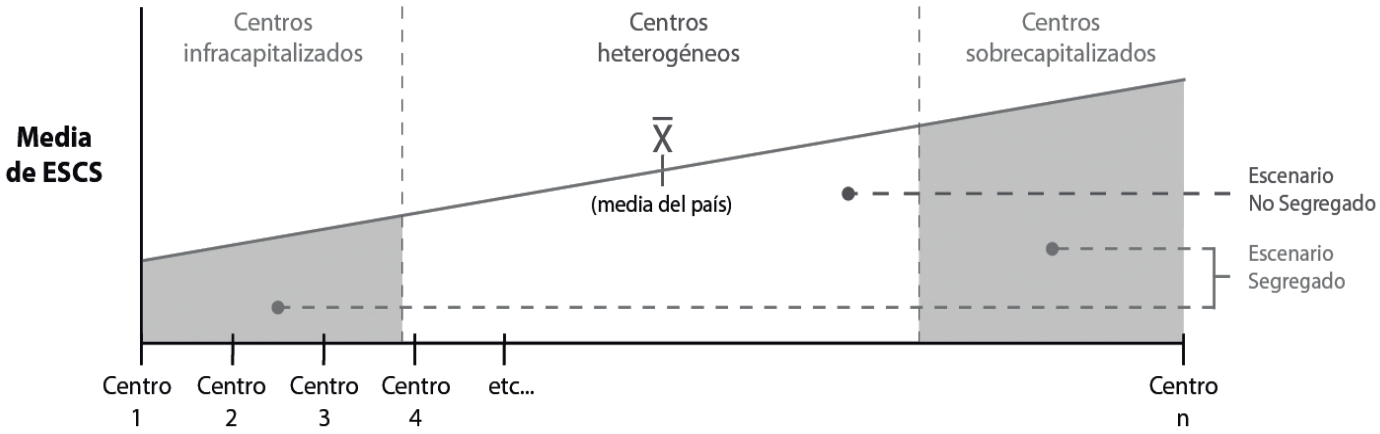
Tabla I. Variables independientes de los modelos de análisis multinivel

Nombre	Tipo	Valores
Nivel estudiante		
Índice de Estatus Económico, Social y Cultural (ESCS)	Numérica	Índice sintético que integra el estatus ocupacional y el nivel educativo de los padres, así como los recursos educativos en el hogar y las posesiones culturales
Sexo	*Dummy*	0 = chica 1 = chico
Procedencia	*Dummy*	0 = autóctono + segunda generación 1 = primera generación
Actitudes escolares	Numérica	Índice que recoge en qué medida los estudiantes perciben la utilidad de la escuela. Los valores más elevados indican actitudes más positivas hacia la escuela
Unidad familiar	*Dummy*	0 = no monoparental 1 = monoparental
Nivel centro		
Titularidad	*Dummy*	0 = publico 1= privado concertado + privado no concertado
Ratio alumnos/profesor	Numérica	Ratio del número de alumnos por cada profesor del centro
Responsabilidad en el currículo y la evaluación	Numérica	Índice que mide el nivel de autonomía del centro para decidir contenidos curriculares y fijar políticas de evaluación
Responsabilidad en la asignación de recursos	Numérica	Índice que mide el nivel de autonomía del centro para contratar profesores y fijar salarios
Recursos educativos	Numérica	Índice que mide la percepción de los directores de centro sobre los recursos educativos disponibles. Los valores más elevados indican una mejor calidad de los recursos educativos
Falta de profesores	Numérica	Índice que mide la percepción de los directores de centro sobre la falta de profesores cualificados en diferentes materias. Los valores más elevados indican una mayor falta de profesores en su centro
Profesores titulados	Numérica	Proporción de profesores con una cualificación de nivel CINE 5A en cada centro
Agrupación por nivel	*Dummy*	Indica como las escuelas organizan la docencia función de las habilidades diferenciadas del alumnado. 0 = No agrupación por nivel 1= Agrupación por nivel
Selección académica	*Dummy*	Indica en qué medida la admisión del alumnado en las escuelas está basada en criterios académicos 0 = No selección académica 1= Selección académica
% chicos	Numérica	Proporción de chicos en el centro
% inmigrantes	Numérica	Proporción de alumnos inmigrantes en el centro
Media ESCS	Numérica	Media del nivel de ESCS de los alumnos del centro

Conviene destacar que todas las variables independientes numéricas han sido centradas al valor medio del conjunto del país. Así pues, el valor cero de cada una de estas variables se corresponde con el valor medio del conjunto de alumnos o de escuelas del sistema educativo en cuestión (según sea una variable individual o de centro).

A continuación, hemos procedido a realizar el ejercicio de simulación basado en la creación de dos escenarios escolares hipotéticos que contrastan en su distribución del alumnado entre las escuelas que los integran. Para la confección de tales escenarios hemos clasificado los centros en función del nivel medio de ESCS de sus alumnos: *escuelas infracapitalizadas* (escuelas con un nivel medio de ESCS significativamente inferior al del conjunto del país), *escuelas heterogéneas* (escuelas con un nivel medio de ESCS que no dista significativamente del nivel medio del país) y *escuelas sobrecapitalizadas* (escuelas con un nivel medio de ESCS significativamente superior al del conjunto del país). El primer escenario, que denominaremos *segregado*, está integrado por la suma de las escuelas infracapitalizadas y las escuelas sobrecapitalizadas. Nos situamos, pues, ante una realidad hipotética en la cual no existirían escuelas heterogéneas, y en el que las escuelas tenderían a tener una composición social homogénea. En cambio, el segundo escenario, que denominaremos *no segregado*, está integrado exclusivamente por las escuelas heterogéneas. Nos encontramos, pues, ante una realidad hipotética opuesta a la anterior. El Gráfico 1 ilustra el esquema básico de elaboración de ambos escenarios.

Gráfico 1. Esquema de configuración de los escenarios



Para que los resultados obtenidos sean estrictamente comparables, hemos aplicado diferentes ponderaciones estadísticas en la elaboración de los escenarios. Para construir el escenario segregado hemos tomado como punto de partida que los dos subescenarios que lo componen (el sobrecapitalizado y el infracapitalizado) pesaran lo mismo, pero posteriormente hemos modificado tales proporciones para asegurar que el escenario resultante se ajusta a las características del país y que, por lo tanto, es una escenario simulado extrapolable a su totalidad.[19].

[19] El procedimiento de corrección consiste en calcular la distancia existente entre el nivel medio de ESCS de las escuelas infracapitalizadas y el nivel medio de ESCS del conjunto del país, y también entre el nivel medio del país y el de las escuelas sobrecapitalizadas. En el caso de que ambas distancias fueran exactas, se mantendría la distribución simétrica de partida. Pero cuando difieren se da más peso a aquel perfil de centros que presenta una distancia menor respecto a la media del conjunto del país. Concretamente, el peso relativo de más que se da a este perfil de centros se corresponde con el peso de más que tiene el otro perfil de

Una vez elaborado el escenario segregado, se ha procedido a equiparar la composición social del alumnado de ambos escenarios con el propósito de que los resultados sean estrictamente comparables. En este sentido, se ha ajustado la composición social de cada escenario a la composición social del conjunto de la muestra del país en base a las tres variables siguientes: sexo, procedencia y ESCS. De esta forma, en ambos escenarios encontramos el mismo porcentaje de chicos, el mismo porcentaje de alumnos inmigrantes y el mismo porcentaje de alumnos con los diferentes niveles de ESCS.

El peso del efecto composición

Los análisis multinivel referentes al sistema educativo español (Tabla II) ofrecen unos resultados bastante parejos en los tres ámbitos de competencias; lectura, matemáticas y ciencias. En los tres casos se reproduce un patrón similar en cuanto a la incidencia de las diferentes variables independientes tomadas en consideración. Las variables individuales son las que, en conjunto, tienen un mayor impacto sobre las puntuaciones de los alumnos: como se puede observar en la Tabla II, el Modelo 1 (correspondiente a las variables individuales) explica el 60,6% de la varianza entre-escuelas en lectura, el 51,7% en matemáticas y el 57,3% en ciencias. En el Modelo 3, que al margen de las variables individuales también incorpora el conjunto de variables de centro, esta cifra se incrementa hasta llegar a un 76,1%, un 67,1% y un 69% respectivamente. Todas las variables individuales incorporadas a los modelos tienen un impacto estadísticamente significativo. En el caso del sexo, conviene destacar que en lectura el hecho de ser chico tiene un impacto negativo sobre las puntuaciones, mientras que tanto en matemáticas como en ciencias tiene un impacto positivo.

escuelas en relación a la media de ESCS del país. De este modo se evita dibujar un escenario segregado que no fuera viable teniendo en cuenta el perfil de escuelas infracapitalizadas y sobrecapitalizadas de cada país. Por ejemplo, podría darse el caso de que en la muestra de un país el segmento de escuelas sobrecapitalizadas estuviera integrado por una minoría de escuelas con un nivel de ESCS muy distante al del resto de escuelas. En este caso, una hipotética distribución simétrica del alumnado entre las escuelas infracapitalizadas y las sobrecapitalizadas no sería plausible, debido a que se sobre-representarían escuelas con una composición social "extrema" y no existirían suficientes alumnos con perfil instructivo elevado en el conjunto de la muestra para hacer viable tal distribución hipotética.

Tabla II. Modelos multinivel de las puntuaciones en lectura, matemáticas y ciencias (España)

	Lectura				Matemáticas				Ciencias			
Efectos fijos	Modelo nulo	Modelo 1	Modelo 2	Modelo 3	Modelo nulo	Modelo 1	Modelo 2	Modelo 3	Modelo nulo	Modelo 1	Modelo 2	Modelo 3
Nivel estudiante												
Constante	483.8*** (1.5)	509.1*** (2.0)	513.6*** (3.2)	514.3*** (3.0)	488.5*** (1.6)	493.0*** (2.2)	496.2*** (3.5)	496.9*** (3.3)	491.2*** (1.5)	495.5*** (2.1)	504.2*** (3.3)	504.6*** (3.2)
ESCS		20.2*** (0.7)	19.8*** (0.7)	18.4*** (0.7)		22.5*** (0.7)	22.0*** (0.8)	20.6*** (0.8)		21.0*** (0.7)	20.8*** (0.8)	19.6*** (0.8)
Sexo		-25.9*** (1.3)	-25.5*** (1.3)	-25.2*** (1.3)		21.2*** (1.3)	21.2*** (1.4)	21.4*** (1.4)		11.7*** (1.3)	11.9*** (1.4)	12.3*** (1.4)
Procedencia		-45.7*** (2.7)	-45.3*** (2.9)	-46.2*** (2.9)		-49.4*** (2.8)	-49.8*** (2.9)	-49.6*** (2.9)		-47.3*** (2.8)	-47.5*** (2.9)	-47.9*** (3.0)
Actitudes escolares		6.4*** (0.7)	6.4*** (0.7)	6.5*** (0.7)		5.5*** (0.7)	5.5*** (0.8)	5.6*** (0.8)		3.6*** (0.7)	3.5*** (0.7)	3.6*** (0.7)
Unidad familiar		-4.0** (1.6)	-4.8** (1.7)	-5.1** (1.7)		-7.0*** (1.7)	-7.9*** (1.8)	-8.2*** (1.8)		-2.7* (1.6)	-4.0* (1.7)	-4.2* (1.7)
Nivel centro												
Titularidad			4.4 (4.8)	-0.3 (4.5)			7.1 (5.3)	0.6 (5.0)			0.2 (5.1)	-4.5 (4.8)
Ratio alumnos/profesor			1.4** (0.4)	0.6 (0.4)			0.4 (0.5)	-0.5 (0.4)			1.2** (0.4)	0.4 (0.4)
Responsabilidad en el currículo y la evaluación			2.0 (1.8)	1.3 (1.7)			2.0 (2.0)	1.1 (1,9)			2.0 (1.9)	1.1 (1.8)
Responsabilidad en la asignación de recursos			4.4 (3.2)	1.3 (3.0)			4.6 (3.5)	0.8 (3.3)			3.8 (3.4)	1.0 (3.2)
Recursos educativos			0.9 (1.6)	1.3 (1.4)			1.8 (1.7)	2.0 (1.6)			-0.3 (1.6)	0.1 (1.5)
Falta de profesores			-1.3** (2.3)	-0.9 (2.1)			-0.5 (2.5)	-0.3 (2.3)			-0.7 (2.4)	-0.3 (2.2)
Agrupación por nivel			-5.8* (2.6)	-3.6 (2.4)			-5.7* (2.8)	-2.7 (2.6)			-7.6** (2.7)	-5.2* (2.5)
Selección académica			-1.0 (3.0)	-4.1 (2.8)			-1.5 (3.3)	-4.5 (3.1)			-4.9* (3.2)	-7.5* (3.0)
% chicos				-0.3* (0.1)				-0.3* (0.1)				-0.4 (0.1)
% inmigrantes				0.3*** (0.1)				-0.1 (0.1)				0.2** (0.1)
Media ESCS				28.1*** (2.7)				30.2*** (3.0)				26.5*** (2.9)
Efectos aleatorios												
Varianza intra-centros	6041.4 (54.2)	4554.3 (44.2)	4461.2 (46.8)	4462.9 (46.7)	6634.1 (59.6)	5168.8 (50.1)	5032.4 (52.7)	5031.6 (52.6)	6100.3 (54.8)	4793.4 (46.5)	4680.0 (49.1)	4680.4 (49.1)
Varianza entre-centros	1432.8 (88.6)	564.7 (58.3)	454.4 (55.4)	342.9 (46.3)	1501.0 (94.1)	724.6 (68.3)	631.3 (67.6)	494.2 (57.0)	1396.8 (86.8)	596.3 (61.1)	536.6 (60.9)	433.3 (52.2)
Varianza atribuida a los centros (rho. ϱ) (%)	19.2				18.5				18.6			
Varianza intra-centros explicada (%)		24.6	26.2	26.1		22.1	24.1	24.2		21.4	23.3	23.3
Varianza entre-centros explicada (%)		60.6	68.3	76.1		51.7	57.9	67.1		57.3	61.6	69.0

Nota: *** p < .001; ** p < .01; * p < .05.

En lo que a las variables de centro se refiere, la incidencia de las características organizativas y pedagógicas incorporadas a los modelos es más bien escasa. En el Modelo 2, que integra este grupo de variables conjuntamente con las individuales, solamente tres variables de centro tienen una incidencia estadísticamente significativa: la ratio alumnos/profesor, la falta de profesores y la agrupación por nivel. Ahora bien, al incorporar las variables de composición social (Modelo 3) estos efectos desparecen (con la única excepción de la agrupación por nivel en ciencias).

Entre las variables de composición social, destaca la incidencia que la media de ESCS del centro tiene en relación a las competencias en lectura, matemáticas y ciencia. Por su parte, el porcentaje de chicos y el porcentaje de inmigrantes tienen una incidencia menor, no siendo estadísticamente significativa en alguno de los ámbitos. Así pues, entre las variables de centro, destacan la escasa incidencia de las variables de proceso y la incidencia significativa de la composición social, especialmente el nivel de ESCS del alumnado.

Si comparamos los modelos multinivel de España en lectura con los de Grecia, Portugal y Francia (Tabla III), observamos que el patrón general es bastante parecido, aunque existen algunas diferencias remarcables. En las variables individuales, el peso del nivel de ESCS de los padres es similar en todos los países, el peso del sexo es ligeramente inferior en España y en Francia, y el peso de la procedencia es muy superior en España. En efecto, el hecho de haber nacido en el extranjero tiene un peso mucho más elevado en España que en Portugal o en Grecia, mientras que en Francia no tiene una incidencia estadísticamente significativa. Las actitudes escolares y la unidad familiar no responden a un mismo patrón en los diferentes países; el efecto no siempre tiene el mismo signo, y en algunos casos este no es estadísticamente significativo. En términos globales, es en España donde el conjunto de las variables individuales explican un mayor porcentaje de la varianza entre-centros: concretamente un 60,6%, en contraste con el 51,1% en Portugal, el 36,3% en Grecia y el 23,7% en Francia.

Tabla III. Modelos multinivel de las puntuaciones en lectura (países del modelo de *integración uniforme*)

	España				**Francia** (a)				**Grecia**				**Portugal**			
Efectos fijos	Modelo nulo	Modelo 1	Modelo 2	Modelo 3	Modelo nulo	Modelo 1	Modelo 2	Modelo 3	Modelo nulo	Modelo 1	Modelo 2	Modelo 3	Modelo nulo	Modelo 1	Modelo 2	Modelo 3
Nivel estudiante																
Constante	483.8*** (1.5)	509.1*** (2.0)	513.6*** (3.2)	514.3*** (3.0)	494.1*** (6.6)	506.0*** (6.8)	-	507.5*** (5.0)	489.6*** (4.4)	508.4*** (5.5)	497.1*** (6.6)	504.4*** (6.1)	486.7*** (3.6)	499.3*** (4.0)	502.9*** (5.2)	503.4*** (4.1)
ESCS		20.2*** (0.7)	19.8*** (0.7)	18.4*** (0.7)		15.7*** (1.6)	-	14.1*** (1.6)		17.3*** (1.4)	17.7*** (1.5)	16.3*** (1.6)		19.3*** (0.9)	19.3*** (1.0)	17.8*** (1.0)
Sexo		-25.9*** (1.3)	-25.5*** (1.3)	-25.2*** (1.3)		-24.6*** (2.4)	-	-24.0*** (2.4)		-35.5*** (2.3)	-33.5*** (2.5)	-32.5*** (2.5)		-31.2*** (2.1)	-31.2*** (2.1)	-30.4*** (2.1)
Procedencia		-45.7*** (2.7)	-45.3** (2.9)	-46.2*** (2.9)		-15.2 (8.0)	-	-14.1 (8.1)		-19.6** (5.9)	-18.8** (6.3	-17.0* (6.4)		-25.8*** (6.1)	-26.1*** (6.1)	-24.9*** (6.1)
Actitudes escolares		6.4*** (0.7)	6.4*** (0.7)	6.5*** (0.7)		0.0 (1.2)	-	0.2 (1.2)		-3.9** (1.1)	-3.5** (1.5)	-3.3* (1.2)		6.0*** (1.0)	5.8*** (1.0)	5.9*** (1.0)
Unidad familiar		-4.0** (1.6)	-4.8** (1.7)	-5.1** (1.7)		3.3 (2.7)	-	3.3 (2.8)		2.1 (3.7)	3.5 (4.0)	3.3 (4.0)		6.0* (2.6)	6.5* (2.6)	6.1* (2.6)
Nivel centro																
Titularidad			4.4 (4.8)	-0.3 (4.5)			-	-			-31.9* (20.4)	-42.9* (17.2)			-12.1 (17.6)	-7.4 (12.1)
Ratio alumnos/profesor			1.4** (0.4)	0.6 (0.4)			-	-			7.6*** (1.7)	4.6** (1.5)			4.5** (1.6)	0.8 (1.2)
Responsabilidad en el currículo y la evaluación			2.0 (1.8)	1.3 (1.7)			-	-			2.0 (14.8)	-3.0 (12.3)			3.3 (10.9)	-2.8 (7.5)
Responsabilidad en la asignación de recursos			4.4 (3.2)	1.3 (3.0)			-	-			124.5* (47.2)	64.2 (39.5)			-0.2 (6.9)	2.1 (4.6)
Recursos educativos			0.9 (1.6)	1.3 (1.4)			-	-			3.7 (4.2)	2.6 (3.5)			2.7 (3.8)	-0.4 (2.7)
Falta de profesores			-1.3** (2.3)	-0.9 (2.1)			-	-			-0.7 (4.5)	2.2 (3.7)			2.2 (5.5)	7.6 (3.9)

	España				**Francia** (a)				**Grecia**				**Portugal**			
	Modelo nulo	Modelo 1	Modelo 2	Modelo 3	Modelo nulo	Modelo 1	Modelo 2	Modelo 3	Modelo nulo	Modelo 1	Modelo 2	Modelo 3	Modelo nulo	Modelo 1	Modelo 2	Modelo 3
Profesores titulados (b)			-	-			-	-			30.3 (36.7)	7.9 (30.5)			1.6 (39.7)	-39.0 (28.8)
Agrupación por nivel			-5.8* (2.6)	-3.6 (2.4)			-	-			6.5 (12.8)	5.3 (10.5)			-10.3 (5.7)	-4.2 (3.9)
Selección académica			-1.0 (3.0)	-4.1 (2.8)			-	-			15.7* (7.1)	2.4 (6.0)			9.4 (6.3)	-0.3 (4.4)
% chicos				-0.3* (0.1)			-	-1.2*** (0.3)				-0.9*** (0.3)				-1.4*** (0.2)
% inmigrantes				0.3*** (0.1)			-	0.2 (0.6)				0.0 (0.3)				-1.9*** (0.4)
Media ESCS				28.1*** (2.7)			-	111.7*** (8.6)				46.6*** (7.3)				36.9*** (3.4)
Efectos aleatorios																
Varianza intra-centros	6041.4 (54.2)	4554.3 (44.2)	4461.2 (46.8)	4462.9 (46.7)	4605.6 (102.8)	3941.5 (97.2)	-	3929.1 (97.1)	5510.9 (114.7)	4800.9 (108.5)	4706.6 (115.2)	4697.2 (114.7)	5232.8 (95.9)	4322.3 (85.7)	4399.4 (88.6)	4399.1 (88.1)
Varianza entre-centros	1432.8 (88.6)	564.7 (58.3)	454.4 (55.4)	342.9 (46.3)	6666.6 (777.5)	5089.5 (613.1)	-	1859.1 (270.7)	2763.6 (337.6)	1759.7 (247.2)	1206.5 (207.9)	698.0 (151.7)	2350.4 (262.0)	1150.0 (166.4)	1018.7 (152.5)	324.7 (78.5)
Varianza atribuida a los centros (rho. ϱ) (%)	19.2				59.1				33.4				31.0			
Varianza intra-centros explicada (%)		24.6	26.2	26.1		14.4	-	14.7		12.9	14.6	14.8		17.4	15.9	15.9
Varianza entre-centros explicada (%)		60.6	68.3	76.1		23.7	-	72.1		36.3	56.3	74.7		51.1	56.7	86.2

Nota: *** p < .001; ** p < .01; * p < .05.

(a) Los modelos de Francia no incorporan variables de "proceso escolar" debido a que esta información no se recoge en la prueba PISA de este país.

(b) Variable no pertinente para el caso de España.

En consonancia con estos resultados, en España encontramos un menor peso del efecto composición que en el resto de países. Si atendemos a la variable de composición social con mayor incidencia -la media de ESCS de los centros- observamos que su peso es inferior en el caso de España. El país donde tiene un peso más elevado es Francia, seguido a mucha distancia por Grecia y, a continuación, por Portugal (los datos referentes a las variables de centro de Francia conviene analizarlos con cierta cautela, debido a que en este país los datos PISA no incorporan variables referentes a las características organizativas y pedagógicas de los centros). Por otro lado, y como sucede en el caso de España, en Grecia y en Portugal las variables de proceso tampoco tienen una incidencia destacable, siendo anulados algunos de sus efectos al incorporar las variables de composición social (Modelo 3). Solamente en el caso de Grecia mantienen un efecto estadísticamente significativo la titularidad y la ratio alumnos/profesor. Así pues, los datos reflejan un efecto composición con una incidencia muy destacada, mientras que las variables organizativas y pedagógicas incluidas en el análisis parecen tener un impacto más bien escaso.

El impacto de los escenarios sobre los resultados generales en España

Para conseguir una descripción densa del impacto educativo de los escenarios segregado y no segregado, tanto en términos de resultados globales como de equidad, hemos considerado relevante la observación de cuatro indicadores diferentes: la media de puntuación, la puntuación requerida para superar lo que podríamos considerar como *el umbral de suficiencia*, la puntuación que hemos tomado como requisito de *excelencia moderada*, y finalmente la puntuación de *alta excelencia*. Tres de estos cuatro indicadores corresponden a medidas propuestas por los propios analistas encargados de la explotación del estudio PISA.

La puntuación media es la medida estándar usada en la mayor parte de los estudios comparativos basados en los datos PISA. Algunos autores consideran que es la medida que sintetiza la calidad de un sistema educativo, y de forma implícita así es tomado por la gran mayoría de investigadores (aquellos que lo usan sin problematizarlo).

El *umbral de suficiencia* es un indicador mucho menos usado, pero que resulta de gran interés para complementar aquello que nos muestra la puntuación media. El porcentaje que muestra este indicador corresponde a la proporción de los alumnos que obtienen unos resultados en la prueba PISA que se consideran como el aprendizaje mínimo exigible del paso por el sistema educativo; los niveles de alfabetización y de adquisición de competencias que se debe considerar como el mínimo básico necesario para las sociedades y economías contemporáneas (OECD, 2010). Tanto en la prueba de lectura como en las de matemáticas y ciencias, conlleva alcanzar como mínimo el segundo nivel de la escala de adquisición de competencias propuesto (de 6 niveles), que corresponde a 420 puntos en matemáticas, 409 en ciencias, y 407 en lectura.

La puntuación referente a lo que hemos llamado *alta excelencia* supone la medida antitética a la del umbral de suficiencia. El indicador de alta excelencia se refiere a la proporción de los alumnos que logran superar el quinto nivel en la escala de puntuación propuesta por PISA. En el caso de la prueba de matemáticas, tal nivel se sitúa en los 607 puntos; en ciencias, en los 633 puntos; y en lectura, en los 626 puntos.

Pero hay una cierta asimetría entre el umbral de suficiencia y el indicador de alta excelencia, tanto en el caso español como en tantos otros, por el desajuste entre el volumen de casos que quedan por debajo del umbral de suficiencia (19,5 % de los casos en España, en la prueba de lectura) y los que quedan por encima del nivel de alta excelencia (3,4 % de los casos). El indicador de alta excelencia se refiere a un porcentaje de alumnos mucho menor, y esto conlleva ciertos problemas en su consideración como indicador genérico del impacto global de ciertas transformaciones en los modelos educativos.

Por lo tanto, y más allá de las razones pedagógicas que justifican el establecimiento de tales cánones, hemos considerado oportuno considerar un cuarto indicador, el de *excelencia moderada*, que guarda mayor simetría con el del umbral de suficiencia en cuanto al volumen de casos afectados: en España hay una proporción semejante de alumnos que no alcanzan el umbral de suficiencia y que superan el de excelencia moderada (21,1 %). El indicador de excelencia moderada no es arbitrario, sino que se corresponde con el escalafón de adquisición de competencias inmediatamente anterior (el cuarto nivel) de la escala establecida por PISA a partir de criterios pedagógicos. En la prueba de matemáticas está establecido en los 545 puntos, en la de ciencias en los 559 puntos, y en la de lectura en los 553 puntos.

En este primer punto del apartado descriptivo profundizaremos en la dimensión de los resultados generales que se obtienen en el escenario segregado y no segregado en relación con los cuatro indicadores descritos: puntuación media, umbral de suficiencia, excelencia moderada y alta excelencia, en el caso español.

Tabla IV. Resultados generales de los escenarios en lectura, matemáticas y ciencias (España)

	Lectura				Matemáticas				Ciencias			
	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)
Segregado	482	80,2	22,1	3,7	483	75,9	26,2	8,2	488	81,3	22,1	4,1
No segregado	482	81,9	20,0	2,9	486	77,8	25,3	7,9	491	83,6	21,1	3,7
Diferencial	**0**	**1,7**	**-2,1**	**-0,8**	**3**	**1,9**	**-0,9**	**-0,3**	**3**	**2,3**	**-1,0**	**-0,4**

Lo primero que se advierte en la Tabla IV es que existe una fuerte coherencia entre los resultados obtenidos en las tres pruebas. Sólo en la puntuación media de lectura el contraste entre lo obtenido en uno y otro escenario (0 puntos) es de signo distinto a lo que se advierte en las otras dos pruebas (con un resultado ligeramente favorable al escenario no segregado).

Más allá de esta primera lectura global se advierten diferencias estadísticamente significativas entre los escenarios. En relación a la puntuación media, los resultados revelan que en el escenario no segregado no se obtienen mejores puntuaciones que en el segregado (lectura), o bien que la mejora de la apuesta por el modelo no segregado significa una mejora modesta, de tres puntos (matemáticas y ciencias).

Los otros tres indicadores muestran contrastes más notables y con el mismo signo, e intensidad semejante, en las tres materias evaluadas. El porcentaje de alumnos que superan el umbral de suficiencia es netamente superior en el escenario no segregado, con un incremento del 1,7% en el resultado en lectura, del 1,9% en matemáticas, y del 2,3% en ciencias. En cambio, los resultados en excelencia moderada y alta excelencia son mejores en el escenario segregado. En este escenario, los alumnos que superan el nivel de excelencia moderada son un 2,1% más en lectura, un 0,9% más en matemáticas, y un 1,0% más en ciencias; y los que superan el nivel que marca la alta excelencia son un 0,8%, un 0,3% y un 0,4% más respectivamente.

En términos generales, los resultados evidencian que no parece existir un gran contraste entre los resultados del escenario segregado y el no segregado. Las diferencias no son espectaculares, lo que significa que no hay marcadas ganancias ni pérdidas agregadas en la apuesta por un escenario u otro. Pese a esta lectura general, cabe destacar que sí que hay una tendencia marcada y coherente en las tres materias analizadas: los resultados medios y, sobre todo, la superación del umbral de suficiencia, son mejores en el escenario no segregado, mientras que el volumen de alumnos que superan los distintos niveles de excelencia son superiores en el escenario segregado.

El impacto de los escenarios sobre la equidad educativa en España

Una determinada lectura de los anteriores resultados pudiera corroborar la tesis, ya devenida lugar común, según la cual la apuesta por modelos educativos que atienden prioritariamente a los alumnos más desaventajados suponen una pérdida en términos de excelencia educativa, algo que conlleva una mayor mediocridad general del sistema. Tal lectura parte de una consideración de los logros del escenario no segregado que se reducen a la mejora obtenida sobre el umbral de suficiencia.

Tal indicador se toma como el mejor indicio del impacto del sistema educativo en la consecución de unos resultados equitativos. De este modo, la equidad se toma como aquel principio que orienta al sistema educativo a la consecución de un fin determinado: que todos los alumnos obtengan unos resultados mínimos básicos al final de su paso por aquellos niveles educativos de escolarización obligatoria en un régimen de comprensividad. En términos acreditativos, tal objetivo es fácilmente asociable a la obtención del graduado escolar; en términos de trayectoria formativa, a la continuación en el sistema educativo en las etapas de escolarización postobligatoria; finalmente, en términos de adquisición de competencias, en la superación del umbral de suficiencia.

Más allá de lo loable que pueda ser la orientación al logro de los objetivos anteriores, la interpretación anterior responde a una lectura cuanto menos cuestionable de qué es la equidad educativa. La equidad es el principio según el cual la distribución de los recursos no responde a un criterio de igualdad –o de consecución de unos resultados igualitarios "de mínimos"–, sino de igualación de las oportunidades –en este caso, de las oportunidades educativas. Desde nuestra óptica, tal igualación supone que los resultados de los alumnos deben estar lo menos condicionados posible por aquellos hándicaps estructurales que marcan las posibilidades de lograr un determinado objetivo, de modo que sean las capacidades y el esfuerzo individual los componentes que medien en la consecución de tal logro.

Por lo tanto, la lectura del nivel de equidad de un determinado sistema educativo pasa por la generación de indicadores que señalen hasta qué punto las diferencias en los resultados obtenidos entre los alumnos están condicionadas por los hándicaps estructurales que éstos arrastran. Nuestro modelo toma como el principal de tales hándicaps el nivel de ESCS de los padres, pues es la variable educativa que más claramente se refiere al capital cultural familiar y, por lo tanto, al distanciamiento o proximidad de los alumnos respecto de la cultura escolar.

Todos los indicadores sobre los resultados generales descritos con anterioridad tienen su correspondiente indicador de equidad. Para elaborarlos hemos desgranado los resultados obtenidos por cuatro grupos distintos de alumnos. Los cuatro grupos corresponden a los cuartiles en los que se pude subdividir a los alumnos según el nivel de ESCS de sus padres. Hemos tomado los resultados del cuartil Q1 (correspondiente al 25% de los alumnos con menor nivel de ESCS familiar) y del cuartil Q4 (que agrupa al 25% de los alumnos con mayor nivel de ESCS familiar), y los hemos restado en ambos escenarios. De la resta se obtiene la distancia entre los resultados medios de los alumnos con mayores ventajas estructurales y los resultados medios de los alumnos con mayores desventajas estructurales.

En términos de equidad, la situación óptima respondería a una diferencia mínima o marginal entre los dos cuartiles. Esperar tal logro de cualquier sistema educativo resulta quimérico, pero en cambio cualquier reducción en la distancia entre ambos cuartiles significa una mejoría en la orientación hacia la equidad. La Tabla V sintetiza los resultados obtenidos en el análisis de los cuatro indicadores de equidad –equidad en los resultados medios, equidad en la superación del umbral de suficiencia, equidad en el logro de la excelencia moderada, y equidad en el logro de la alta excelencia.

Tabla V. Resultados de equidad de los escenarios en lectura, matemáticas y ciencias (España)

		Lectura				Matemáticas				Ciencias			
		Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)
Segregado	Q4	532	94,1	40,9	8,6	535	92,1	47,2	17,4	535	94,4	39,4	9,5
	Q1	437	64,4	8,0	0,8	438	58,1	11,7	2,9	443	65,7	9,3	1,3
	Q4-Q1	*95*	*29,7*	*32,9*	*7,7*	*97*	*34,0*	*35,5*	*14,5*	*92*	*28,7*	*30,2*	*8,2*
No segregado	Q4	514	91,1	31,8	5,6	520	89,3	38,4	13,5	524	92,4	33,3	6,8
	Q1	456	71,9	11,8	1,1	457	65,9	15,4	4,4	462	73,8	12,4	1,6
	Q4-Q1	*58*	*19,2*	*20,0*	*4,5*	*63*	*23,4*	*23,0*	*9,1*	*62*	*18,6*	*20,9*	*5,2*
Diferencial Q4-Q1		**-37**	**-10,5**	**-12,8**	**-3,3**	**-34**	**-10,6**	**-12,5**	**-5,5**	**-30**	**-10,2**	**-9,3**	**-3,0**
% reducción		*-38,9*	*-35,4*	*-38,9*	*-42,9*	*-35,1*	*-31,1*	*-35,2*	*-38,0*	*-32,6*	*-35,6*	*-30,8*	*-36,6*

A semejanza de lo que hemos observado en la Tabla IV, los números que obtenemos en las tres materias guardan una coherencia considerable. A diferencia de aquella, en este caso el contraste entre el escenario segregado y el no segregado es notable, y lo que observamos en los cuatro indicadores apunta en una misma dirección.

La diferencia en la puntuación media obtenida por Q4 y Q1 disminuye en 37 puntos en la prueba de lectura en el escenario no segregado respecto del escenario segregado, lo que supone un decremento del 39%; tal disminución es algo menor en la prueba de matemáticas (35%), y de ciencias (33%). La diferencia en el porcentaje de alumnos que superan el umbral de suficiencia es, en la prueba de lectura, del 29,7% en el escenario segregado, y disminuye hasta el 19,2% en el escenario desegregado: son 10,5 puntos porcentuales de diferencia que suponen una disminución del 35% en la incidencia de la inequidad. En matemáticas la disminución es del 31%, y en ciencias del 35%.

En relación a los indicadores de excelencia, donde habíamos observado una leve mejora en los resultados del escenario segregado respecto del no segregado, la equidad en la excelencia es marcadamente mejor en el escenario no segregado que en el segregado. La diferencia en el porcentaje de alumnos que alcanzan la excelencia moderada disminuye del 32,9% en el escenario segregado al 20,0% en el escenario no segregado en la prueba de lectura. Es una disminución del 39% que se explica en buena medida por la pérdida de casos de alumnos en el cuartil Q4 que obtienen la excelencia moderada en el escenario no segregado (una pérdida del 9,1%), pero también por una mejora en el porcentaje de alumnos de Q1 que obtienen tal excelencia en el escenario moderado (una ganancia del 3,8%). Una situación análoga se repite en la prueba de matemáticas (con un diferencial de reducción general del contraste entre Q4 y Q1 del 35%) y de ciencias (31%).

En lo referente a la alta excelencia se dibuja también una situación parecida: el escenario no segregado se revela notablemente mejor en términos de equidad (42% de reducción del diferencial entre Q4 y Q1 en la prueba de lectura, 38% en la prueba de matemáticas, 37% en la de ciencias), si bien lo es más por lo que se pierde en los resultados del cuartil Q4 que por lo que se gana en el cuartil Q1.

El impacto de los escenarios sobre los resultados generales y sobre la equidad educativa en los países del modelo de integración uniforme

La situación de España, ¿es parecida a la que encontraríamos en el resto de países con un sistema educativo similar al español? En la comparación que proponemos hemos restringido el análisis a los resultados obtenidos en la prueba de lectura, que es aquella en la que la prueba PISA 2009 es más afinada. La Tabla VI recoge los resultados generales obtenidos en España, Francia, Grecia y Portugal.

Tabla VI. Resultados generales de los escenarios en lectura (países del modelo de *integración uniforme*)

	España				Francia				Grecia				Portugal			
	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)
Segregado	482	80,2	22,1	3,7	489	76,2	31,7	10,9	475	74,5	22,9	6,0	488	80,5	25,3	5,7
No segregado	482	81,9	20,0	2,9	516	88,8	36,0	8,9	500	87,3	25,9	5,6	497	86,5	25,0	4,1
Diferencial	**0**	**1,7**	**-2,1**	**-0,8**	**27**	**12,6**	**4,3**	**-2,0**	**25**	**12,8**	**3,1**	**-0,4**	**9**	**6,0**	**-0,3**	**-1,6**

En términos generales, la comparativa de resultados entre escenarios en los cuatro indicadores sitúa a España en una situación algo anómala respecto del resto de países. En España la mejora en la nota media del escenario no segregado en contraste con el segregado era nula, y el incremento de alumnos que superan el umbral de suficiencia mejoraba de forma modesta. En los tres países restantes la nota media mejora en el escenario no segregado; de forma considerable en el caso de Francia (27 puntos) y de Grecia (25 puntos), y más modesta en el caso de Portugal (9 puntos). En cuanto a la superación del umbral de suficiencia, el incremento porcentual de los que lo superan en el escenario no segregado es muy superior en los tres países (un 6% más lo superan en Portugal, un 12,6% en Francia, y un 12,8% en Grecia), de forma que alcanzan unos porcentajes de alumnos que superan el umbral de suficiencia de entre el 85% y el 90%.

En relación a la excelencia moderada, en España el escenario no segregado suponía una pérdida moderada en el porcentaje de alumnos que la alcanzan (-2,1%). En cambio, en Portugal la pérdida se muestra prácticamente testimonial (-0,3%), y en Francia y Grecia el escenario no segregado supone ganancias en el volumen de alumnos que logran tal nivel de excelencia (4,3% y 3,1% respectivamente). Los resultados en alta excelencia guardan una mayor semejanza en los cuatro países, de forma que la pérdida en el escenario no segregado que veíamos en España (-0,8%) se repite, en términos no muy disímiles, en el caso de Francia (-2.0%), Grecia (-0,4%) y Portugal (-1,6%).

En los datos sobre equidad ocurre algo parecido a lo observado en los resultados generales. La Tabla VII así lo refleja.

Tabla VII. Resultados de equidad de los escenarios en lectura (países del modelo de *integración uniforme*)

		España				Francia				Grecia				Portugal			
		Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)	Puntuación media	Umbral de suficiencia (%)	Excelencia moderada (%)	Alta excelencia (%)
Segregado	Q4	532	94,1	40,9	8,6	563	94,5	59,8	24,2	528	90,6	41,8	13,1	545	95,7	47,6	13,7
	Q1	437	64,4	8,0	0,8	413	51,9	7,4	1,0	424	56,2	7,9	0,8	440	64,8	9,4	1,4
	Q4-Q1	*95*	*29,7*	*32,9*	*7,7*	*150*	*42,7*	*52,4*	*23,2*	*104*	*34,4*	*34,0*	*12,4*	*105*	*31,0*	*38,2*	*12,2*
No segregado	Q4	514	91,1	31,8	5,6	539	92,2	47,5	13,9	529	93,2	38,1	10,0	527	92,9	38,1	8,7
	Q1	456	71,9	11,8	1,1	492	84,0	25,4	3,9	467	78,1	13,5	1,6	472	79,4	13,8	1,5
	Q4-Q1	*58*	*19,2*	*20,0*	*4,5*	*47*	*8,1*	*22,1*	*9,9*	*62*	*15,1*	*24,6*	*8,4*	*55*	*13,5*	*24,3*	*7,2*
Diferencial Q4-Q1		**-37**	**-10,5**	**-12,8**	**-3,3**	**-103**	**-34,5**	**-30,4**	**-13,3**	**-42**	**-19,3**	**-9,3**	**-4,0**	**-50**	**-17,5**	**-13,9**	**-5,1**
% reducción		*-38,9*	*-35,4*	*-38,9*	*-42,9*	*-68,7*	*-80,8*	*-58,0*	*-57,3*	*-40,4*	*-56,1*	*-27,4*	*-32,3*	*-47,6*	*-56,5*	*-36,4*	*-41,8*

Si el escenario no segregado se mostraba más inequívocamente positivo en el caso de Francia, Grecia y Portugal que en el caso de España, la idoneidad de tal escenario en términos de equidad educativa es también más clara en estos tres países. Es algo especialmente evidente en relación a la nota media y al umbral de suficiencia, donde la reducción de la diferencia de resultados entre Q4 y Q1 es siempre superior al 40%, y a veces mucho mayor. Es el caso, por ejemplo, de Francia, donde la reducción de la diferencia de alumnos que superan el umbral de suficiencia es del 80,8%, y se explica sobre todo per el volumen de alumnos en el cuartil Q1 que en el escenario no segregado superan este umbral (84,0%) en comparación con el escenario segregado (51,9%).

En cuanto a los indicadores de excelencia, la mejora de equidad de los cuatro países se mueve en parámetros más semejantes a lo visto en España, sobre todo en relación a la alta excelencia. Sin embargo, cabe precisar que en relación a la excelencia moderada, y a diferencia de España, en los otros tres países la mejora de la equidad se explica tanto por el empeoramiento de los alumnos del cuartil Q4 en el escenario no segregado como por una mejora análoga, en volumen, de los alumnos del cuartil Q1.

Modalidades de equidad

Como hemos visto, la apuesta por el escenario segregado o por el no segregado tendría distintas repercusiones según los países y dependiendo de los indicadores a los cuales se atienda. En todos los casos y situaciones los escenarios no segregados manifiestan ganancias en términos de equidad, pero las modulaciones de tal equidad difieren entre sí.

Podemos definir tres modalidades básicas de equidad: la *equidad aditiva*, la *equidad neutra* y la *equidad reductora*. Por equidad aditiva entendemos aquel resultado obtenido en un indicador, en la comparación entre el escenario segregado y el no segregado (y, más genéricamente, entre dos escenarios educativos determinados), que evidencia una mejora en el segundo escenario tanto en términos de equidad como en el resultado general de aquel indicador. Por ejemplo, en el caso de la puntuación media se obtendría un resultado de equidad aditiva cuando la reducción de la diferencia entre Q4 y Q1 se combina con una nota media mayor en el escenario segregado.

En cambio, por equidad reductora entendemos la situación contraria: cuando a la mejora en términos de equidad del segundo escenario la acompaña un empeoramiento de los resultados generales reflejados en el indicador. En nuestro ejemplo, tal situación se daría si la reducción de la diferencia entre Q4 y Q1 se conjuga con un resultado de nota media peor en el escenario no segregado.

La tercera modalidad, que llamamos equidad neutra, es aquella en que la mejora en equidad del segundo escenario es paralela a unos resultados generales que ni mejoran ni empeoran (o que apenas lo hacen). Se daría en el caso que la reducción de la diferencia entre Q4 y Q1 mezclara con una nota media semejante en los dos escenarios.

Más allá de estas modalidades básicas, también es relevante atender a la intensidad con que la equidad aditiva o reductora se manifiesta; no es lo mismo si las ganancias o las pérdidas en los resultados generales son moderadas o elevadas. Por lo tanto, es necesario parametrizar tales intensidades. En relación a les resultados medios, hemos considerado nula una ganancia o pérdida menor del 1% en el escenario no segregado respecto del segregado (por lo tanto, la modalidad de equidad resultante es la neutra); moderada una ganancia o pérdida de entre el 1,01% y el 5%, y elevadas las ganancias o pérdidas superiores al 5,01%.

En cambio, en los otros tres indicadores, que no comparan puntuaciones sino porcentajes de alumnos, hemos establecido unos parámetros distintos. Hemos considerado nula una ganancia o pérdida relativa menor del 5%; moderadas las ganancias o pérdidas de entre el 5,01% y el 25%; y elevadas las superiores al 25,01%[20]. A continuación resumimos en una tabla tal propuesta analítica:

[20] En el cálculo de los porcentajes de ganancias o pérdidas en el umbral de suficiencia, hemos tomado de referencia el porcentaje de los alumnos que no superaban tal umbral, de forma que el porcentaje resultante refleja la proporción de alumnos adicionales que superan tal umbral en el escenario no segregado respecto de los que fracasaban en el escenario no segregado. Por lo tanto, el porcentaje resultante refleja el decremento en el volumen de los alumnos que fracasan en la adquisición de tal nivel de competencias.

Tabla VIII. Modalidades de equidad (comparativa entre escenarios)

Resultados (escenario no segregado respecto al escenario segregado)	Intensidad		
	Muy baja o nula	Moderada	Elevada
Mejores	=	↑	↑↑
Iguales	=	-	-
Peores	=	↓	↓↓

Finalmente, la situación resultante permite hacer una lectura de síntesis para cada país, a partir de los resultados reflejados en los tres indicadores principales (resultado medio, umbral de suficiencia y excelencia moderada) y del indicador complementario sobre la alta excelencia. La tabla que proponemos a continuación resume tanto las modalidades de equidad que obtienen los cuatro países en cada indicador como un indicador de síntesis sobre la modalidad de equidad que le corresponde a cada país:

Tabla IX. Modalidades de equidad (comparativa entre escenarios) por países

Países	Indicadores				Síntesis
	Puntuación media	Umbral de suficiencia	Excelencia Moderada	Alta	
España	= (0.0%)	↑ (8,5%)	↓ (-9,5%)	↓ (-21,6%)	=
Francia	↑↑ (5,5%)	↑↑ (50,1%)	↑ (13,6%)	↓ (-18,3%)	↑↑
Grecia	↑↑ (5,3%)	↑↑ (50,2%)	↑ (13,5%)	↓ (-6,6%)	↑↑
Portugal	↑ (1,8%)	↑↑ (30,8%)	= (-1,9%)	↓↓ (-28,1%)	↑

De la tabla anterior tan procedente es hacer una lectura de los resultados de cada indicador como de los diferentes países. Sobre los indicadores, cabe destacar que el comportamiento de cada uno de ellos tiene sus particularidades. El resultado medio muestra en tres de los cuatro países la modalidad de la equidad aditiva, que además es, en Francia y Grecia, una equidad aditiva elevada. En cambio, en España el resultado medio del escenario no segregado se rige por la modalidad de equidad neutra. Por lo tanto, en ningún caso se da una situación de equidad reductora. Encontramos algo semejante en el indicador del umbral de suficiencia, pero con una mayor acentuación de la equidad aditiva. En España tal equidad aditiva es moderada, y en los otros tres países elevada.

En los indicadores de excelencia la situación resultante es otra. En lo relativo al principal indicador, el de excelencia moderada, en los diferentes países coexisten situaciones diversas. Tanto encontramos un caso de equidad reductora moderada (España) como uno de equidad neutra (Portugal) y dos de equidad aditiva (Francia y Grecia). En cambio, en el indicador

complementario de alta excelencia la modalidad de equidad que comparten todos los países es la de equidad reductora, que en Portugal es elevada y en el resto de países moderada.

En la lectura por países también encontramos situaciones contrastadas. Hay dos países, Francia y Grecia, cuyos indicadores tienen un comportamiento semejante. La equidad aditiva elevada describe sus ganancias en resultados medios y superación del umbral de suficiencia, y la equidad aditiva moderada sus ganancias en excelencia moderada. Sólo en el indicador complementario de la alta excelencia el resultado del escenario no segregado es menos favorable, reflejando una modalidad de equidad reductora moderada. Teniendo en cuenta tales resultados, podemos concluir que en ambos países la apuesta por el escenario no segregado implicaría un modelo de equidad aditiva elevada.

España se sitúa en una posición marcadamente alejada de la de los países anteriores. El escenario no segregado sólo refleja equidad aditiva (de intensidad moderada) en relación a la superación del umbral de suficiencia, mientras que se ajusta a la modalidad de equidad neutra en los resultados medios y a la equidad reductora (moderada) en los dos indicadores de excelencia. La síntesis de los indicadores muestra que, en España, la apuesta por el escenario no segregado reflejaría una modalidad de equidad neutra, donde las importantes ganancias en términos de equidad en todos los indicadores irían acompañadas de una situación más ambivalente en relación a los resultados agregados.

Finalmente, el caso de Portugal se encuentra a medio camino de los anteriores. La equidad aditiva queda fijada en sus ganancias tanto en resultados medios (equidad aditiva moderada) como en el umbral de suficiencia (equidad aditiva elevada). Por su parte, el indicador de excelencia moderada no refleja pérdidas en los resultados, sino que muestra equidad neutra. Sólo en el indicador complementario de la alta excelencia los resultados son menos positivos; muestran una equidad reductora elevada. En síntesis, Portugal quedaría encajado en un modelo de equidad aditiva moderada si apostara por un escenario no segregado.

Conclusiones

El contraste entre los escenarios segregado y no segregado de los países que, con España, responden al modelo de *integración uniforme*, demuestra que las ganancias en equidad de tender hacia el escenario no segregado son contundentes. En todos los países la reducción de las diferencias entre los alumnos con mayor y con menor ESCS familiar, en el paso del escenario segregado al no segregado, es más que notable en todos los indicadores analizados, llegando hasta el 80,8% de reducción de la diferencia en el porcentaje de alumnos que superan el umbral de suficiencia en Francia.

La apuesta por políticas de distribución de los alumnos que favorezcan los mapas escolares compuestos por escuelas internamente heterogéneas y homogéneas entre sí, en cuanto al nivel de ESCS de las familias, conllevaría una mejora incuestionable de la equidad de estos sistemas educativos. Tal tendencia conseguiría reducir un elemento de la desigualdad educativa particularmente incómodo en términos ideológicos: aquel que se desprende del efecto composición de las escuelas y, por lo tanto, no de la calidad de la escuela o del "talento" del alumno, sino del estatus familiar de los compañeros de aula.

Ahora bien, tan relevante como el logro en términos de equidad es la comprobación de que los escenarios no segregados no conllevarían un empeoramiento en los resultados educativos globales, en cuanto a adquisición de competencias. En todos los países se lograría una mejora substantiva del porcentaje general de alumnos que superan el umbral de suficiencia, y, salvo en España, se mejorarían los resultados medios agregados de adquisición de competencias –en España no empeorarían, e incluso mejorarían levemente en matemáticas y ciencias. En dos de los países analizados, Francia y Grecia, incluso mejoraría el porcentaje de alumnos que superan la puntuación denotativa de la excelencia moderada. De hecho, encontramos una cierta correlación entre la magnitud del efecto composición que hemos constatado para cada país mediante el análisis multinivel y el efecto positivo del escenario no segregado en relación a los diferentes indicadores de resultados tenidos en consideración (recordemos que España era el país donde la magnitud del efecto composición era inferior).

Por lo tanto, la mejora en equidad de apostar por el escenario no segregado respondería, en líneas generales, a una modalidad de equidad que hemos llamado aditiva, y que se caracteriza precisamente por comportar ganancias paralelas en los resultados generales del sistema educativo. Sólo en el caso de la alta excelencia la pequeña proporción de alumnos que la obtienen se reduciría en el escenario no segregado. Es una reducción pequeña, en porcentajes absolutos, pero que se repite en todos los países. A pesar de que el escenario segregado presenta mejores resultados, también allí el volumen de alumnos que logra tal nivel de excelencia es muy minoritario (entre el 3,7% de los alumnos en España y el 10,9% en Francia). Por lo tanto, parece pertinente preguntarse si el abordaje de la mejora de la alta excelencia no debiera pasar por políticas educativas que no tengan que ver con la distribución del alumnado, que en cambio parece mostrarse muy eficaz en el logro de otros fines educativos.

Sólo hay una excepción a la tónica general señalada: España. Se trata de un caso particular entre los países del modelo de integración uniforme, pues la incuestionable mejora en términos de equidad de apostar por el escenario no segregado no viene acompañada por una mejora global en los resultados generales. España se regiría por un modelo de equidad neutra, con indicadores que mejoran (porcentaje de alumnos que superan el umbral de suficiencia), pero otros que empeoran (ambos indicadores de excelencia). La mejora en equidad y el no empeoramiento en resultados hace también más atractiva la apuesta por el escenario no segregado, pero los logros no son igual de espectaculares que en el resto de países.

¿A qué se debe tal diferencia? Nos atreveríamos a plantear dos hipótesis explicativas a explorar. La primera es que las diferencias estructurales entre los países, sobre todo en relación al nivel de segregación del sistema escolar y a los niveles tanto generales como de dispersión del ECSC de los países, hacen que el impacto positivo de la no segregación sea más atenuado en España. La segunda hipótesis atendería, en cambio, a particularidades pedagógicas y curriculares de nuestro sistema educativo. Pero el contraste de tales hipótesis ya no tiene cabida, ni que sea por una cuestión tan mundana como el espacio disponible, en el presente artículo.

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Publicació E

Títol: L'efecte composició com a factor d'èxit escolar: projecció dels resultats educatius en una proposta analítica d'escenaris segregat i desagregat

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5 L'efecte composició com a factor d'èxit escolar: projecció dels resultats educatius en una proposta analítica d'escenaris segregat i desegregat[1]

Ricard Benito Pérez i Isaac Gonzàlez Balletbó

1. L'elaboració d'aquest capítol ha comptat amb el suport del projecte d'I+D+i (MICINN) "Regímenes escolares y equidad educativa" (CSO2009-09954) i amb el finançament de la Fundación Ramón Areces atorgat al projecte "Factores de desarrollo, política educativa y logros formativos en los países avanzados".

Introducció: la importància de l'efecte composició

Al llarg de les darreres dècades, s'ha consolidat una línia de recerca en sociologia de l'educació orientada a l'anàlisi de l'*efecte composició* sobre el rendiment acadèmic dels alumnes. A través de l'efecte composició s'observa que, més enllà de les característiques individuals dels alumnes, les seves característiques agregades dins de cada centre educatiu afecten el rendiment escolar. Així, que un alumne sigui escolaritzat en un centre socialment afavorit o socialment desafavorit pot tenir conseqüències significatives sobre els seus resultats escolars. Des d'aquests plantejaments es fa palès que, d'entre el conjunt de característiques dels centres que exerceixen una influència significativa sobre els resultats —és a dir, l'anomenat *efecte escola*—, cal observar no només les característiques pedagògiques i organitzatives de les escoles (en direm l'*efecte procés*), sinó també les característiques del conjunt d'alumnes que s'hi escolaritzen (l'*efecte composició*).

Tant en la literatura acadèmica com en la política educativa hi ha certa tendència a confrontar aquells que defensen que, per analitzar (i/o intervenir sobre) les desigualtats d'un sistema educatiu, cal prioritzar l'*efecte procés*, amb aquells altres que es concentren en l'*efecte composició* (Benito i Gonzàlez, 2010). Aquest capítol aporta noves evidències empíriques sobre la incidència de l'efecte composició sobre el rendiment acadèmic i les possibilitats de maximitzar l'èxit escolar dins del nostre sistema edu-

catiu. Malgrat aquest enfocament, no voldríem que això fos entès com una negació ni de la importància explicativa de l'efecte procés, ni del camp de millora potencial d'una intervenció decidida i sòlida sobre les qüestions pedagògiques o organitzatives que integren aquest procés.

En els darrers anys, un bon nombre de recerques han aportat evidències empíriques força contundents en relació amb el pes explicatiu de la composició escolar sobre el rendiment acadèmic dels alumnes i de les escoles. Moltes escoles mesuren els efectes de la composició social a partir de la procedència dels alumnes o dels seus progenitors (Hanushek, Kain i Rivkin, 2002; Dronkers i Levels, 2006). Altres, en canvi, focalitzen l'interès en variables relatives a l'estatus econòmic, cultural o acadèmic dels progenitors (Caldas i Bankston, 1997; Lauder *et al.*, 2007; Alegre i Arnett, 2007, Dumay, Dupriez i Vause, 2008). També trobem algunes recerques (menys nombroses) que han posat en qüestió l'existència d'aquest efecte (Teddlie, Stringfield i Reynolds, 2000; Marks, McMillan i Hillman, 2001); en termes generals, però, la majoria d'investigacions realitzades durant les darreres dècades ha destacat la rellevància d'aquest factor, tot i que no existeix unanimitat pel que fa a la seva dimensió, intensitat o vectors explicatius (Thrupp, Lauder i Robinson, 2002; Nash, 2003).

A casa nostra, diverses anàlisis estadístiques de les dades PISA han abordat la qüestió de l'efecte composició. Les dades de l'estudi PISA-2003 van servir per evidenciar que les diferències de resultats en matemàtiques entre els centres públics i els centres privats eren conseqüència de les característiques socioeconòmiques individuals i agregades de l'alumnat, i que, un cop controlades estadísticament, deixaven les diferències en un nivell no significatiu (Ferrer, Ferrer i Castel, 2006). L'evidència empírica va emergir novament en l'anàlisi de les dades de l'estudi PISA-2006 (Ferrer, Castel i Valiente, 2009).

Altres recerques han apuntat en la mateixa direcció. Resulta especialment interessant una anàlisi estadística multinivell realitzada a partir de les dades PISA-2003 per al conjunt d'Espanya (Calero *et al.*, 2007), en què s'arriba a conclusions més concretes al voltant de l'efecte composició sobre els resultats en matemàtiques, tot posant de manifest que els resultats dels alumnes, a títol individual, varien en funció del nivell d'estudis dels pares del centre on s'escolaritzen, del percentatge d'alumnes immigrats

i del percentatge de noies escolaritzades. A més, aquesta anàlisi mostra que l'efecte del nivell d'estudis i de la procedència és més elevat al nivell agregat de centre escolar que a escala individual,[2] en la mateixa línia ja apuntada per Dumay i Dupriez (2008). Estudis posteriors basats en les dades PISA-2006 confirmen la rellevància explicativa de l'efecte composició (Calero i Waisgrais, 2009; Marí-Klose *et al.*, 2009).

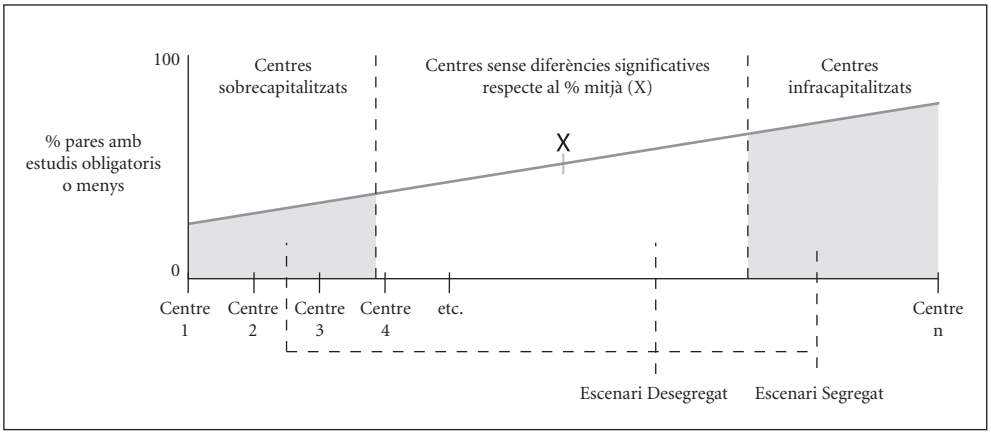
Una proposta analítica: la projecció d'escenaris

L'evidència empírica que aquí aportem mesura l'efecte composició a partir de l'estatus sociocultural dels pares. Concretament, prenem el capital instructiu dels pares com a variable de jerarquització sociocultural dels alumnes.[3] Lògicament, aquesta no és la novetat principal del que aquí presentem. La nostra proposta explora una nova dimensió en l'anàlisi de l'efecte composició mitjançant l'ús d'una nova eina d'anàlisi: la projecció dels resultats que obtenen els alumnes en *escenaris* educatius contrastats en relació amb la composició social de les escoles. Si com evidencia la literatura

2. Una de les qüestions més interessants de l'estudi és que també integra en l'anàlisi diferents variables integrades en l'òrbita de l'efecte procés, com ara els recursos disponibles pels centres o les seves pràctiques pedagògiques, i aquestes mostren una incidència explicativa menor del que seria d'esperar. El fet que els alumnes segueixin un model d'estudi cooperatiu o competitiu; el tipus de relació amb el professorat; el grau d'autonomia del centre en la gestió; o el nivell de participació del professorat en la gestió no tenen un impacte significatiu sobre el rendiment dels alumnes. Certament, no creiem que aquests resultats hagin de servir per menystenir la rellevància de l'efecte procés, entre altres coses perquè els estudis quantitatius no sempre recullen de forma òptima els elements pedagògics o organitzatius que marquen la diferència entre escoles més o menys exitoses. En canvi, sí que haurien de servir per posar en qüestió les debilitats d'alguns discursos que, presumptament sustentats en evidències objectives inqüestionables, impulsen certes reformes en els models organitzatius de les escoles com a solució prioritària als problemes del sistema educatiu.

3. Hem optat per mesurar la composició social dels centres a partir de l'estatus sociocultural dels pares perquè aquest ha estat a bastament contrastat com un dels factors familiars amb més incidència sobre el rendiment acadèmic dels alumnes. Més enllà d'aquesta evidència empírica, defensem que l'estatus sociocultural és la dimensió que millor demarca el distanciament potencial que pot tenir l'alumne respecte de la cultura escolar, en qüestions instrumentals i/o expressives (Benito i Gonzàlez, 2008). Com a indicador de l'estatus sociocultural hem optat per treballar amb el nivell d'estudis dels pares perquè es tracta d'una variable recollida en les dues bases de dades que hem emprat i així poder treballar amb composicions socials de la mateixa naturalesa en totes dues. Prenem com a referència el nivell d'estudis del progenitor que ha tingut major itinerari acadèmic.

Figura 1.
Proposta analítica d'escenaris segregat i desegregat



Nota 1: El punt de referència per agrupar els centres en els dos escenaris és el percentatge de pares amb estudis obligatoris del conjunt de la mostra (assenyalat en el gràfic amb una *x*); els centres amb un percentatge proper a aquest valor s'inclouen en l'escenari desegregat, els centres amb una distància estadísticament significativa s'inclouen en l'escenari segregat.
Nota 2: La composició social d'ambdós escenaris ha estat ponderada per sexe, capital instructiu familiar i procedència, tot ajustant els pesos de les categories d'aquestes variables a la composició social del conjunt de la mostra. D'aquesta forma, tots dos escenaris presenten la mateixa composició social, dibuixant així dues distribucions (hipotètiques) d'una mateixa població escolar entre els centres educatius d'una xarxa escolar determinada.
Font: Elaboració pròpia.

acadèmica sobre l'efecte composició el perfil social de l'alumnat d'un centre escolar incideix decisivament en el rendiment de llurs alumnes, ens proposem explorar què succeiria dins del sistema educatiu català en dos escenaris educatius hipotètics, però possibles i contrastats quant a la seva composició social.

El primer dels escenaris es configura a partir d'una projecció dels resultats acadèmics que trobem en les situacions de major segregació escolar a Catalunya, ja sigui per sobreconcentració d'estudiants amb pares amb menor capital instructiu, ja sigui perquè aquests són especialment escassos. Per tant, l'escenari segregat suma els centres

d'ESO amb major volum de famílies de perfil instructiu inferior (homogènies en la infracapitalització instructiva familiar) i les escoles amb un perfil instructiu superior (homogènies en la seva sobrecapitalització instructiva familiar).[4] Lògicament, cal sumar aquests dos perfils de centres d'ESO per aconseguir generar un escenari escolar plausible per al conjunt de Catalunya, atès que un escenari que, per exemple, només reunís les escoles sobrecapitalitzades no respondria al perfil sociocultural real del país.

El segon escenari, per contra, es genera a partir de l'agrupació de tots aquells centres educatius que no mostren una distància significativa respecte al percentatge de famílies amb un perfil instructiu inferior del conjunt de la mostra. Es tracta de centres amb un grau d'heterogeneïtat en els perfils instructius dels pares elevat, i que conformen per tant un escenari desegregat. Com es pot observar en la figura 1, els centres de l'escenari segregat a què abans hem fet referència són precisament totes aquelles escoles que no es troben en aquesta situació de proximitat estadísticament significativa respecte al percentatge de famílies amb estudis obligatoris del conjunt de la mostra, ja sigui per excés o per defecte de famílies amb aquest perfil.

4. Trobem en aquesta darrera afirmació una inferència que requereix una major explicació. Hem procedit a l'ordenació de les escoles en funció del percentatge d'alumnes en què cap dels seus progenitors tenia estudis postobligatoris, i a partir d'aquí hem projectat els escenaris segregat (ajuntant el dos extrems del continuum d'escoles) i desegregat. Certament, en el cas de les escoles amb major percentatge de pares sense estudis postobligatoris és fàcil defensar que es tracta d'escoles que concentren alumnes de baix perfil instructiu parental, i que per aquest motiu se les considera segregades. En canvi, en l'altre extrem del nostre ventall escolar trobem escoles que es caracteritzen per tenir una proporció especialment baixa d'aquest perfil d'alumnes, però és més difícil justificar que siguin considerats «segregats» perquè poden tenir una barreja considerable d'alumnes dels altres perfils (amb algun progenitor amb estudis postobligatoris, i amb algun progenitor amb estudis universitaris). En tot cas, i malgrat que sigui un xic estrany, els podem considerar «segregats» respecte de la minoria de pares amb menor capital instructiu. Val a dir, d'altra banda, que el cert és que hem provat altres opcions d'ordenació dels centres en funció del nivell d'estudis dels pares per altres procediments (en funció del percentatge de pares amb estudis universitaris; atorgant una puntuació a cada nivell d'estudis dels pares i ordenant els centres a partir de la puntuació obtinguda), i en tots els casos els resultats són similars a l'opció per la qual finalment ens hem decantat. És, per tant, un procediment tan vàlid com altres per ordenar les escoles en funció del capital acadèmic familiar que concentren, de les més descapitalitzades a les més capitalitzades; en tots els casos, considerem les més descapitalitzades i les més capitalitzades com les més segregadores, i les posicions intermèdies, les més desegregadores.

Val a dir, per tant, que la projecció d'aquests dos escenaris no es basa ni en casos minoritaris d'extrema segregació i homogeneïtat interna, ni d'extrema desegregació i heterogeneïtat interna. Per fer aquestes projeccions s'ha emprat la pràctica totalitat de les mostres de centres i d'alumnes de què es disposava a les bases de dades amb què hem treballat, de forma que no ens trobem en situacions de segregació i de no segregació pures. S'han dividit els centres entre aquells que tendeixen a la segregació i aquells que tendeixen a la desegregació. D'aquesta forma, els escenaris responen de forma més realista a què passaria si, en relació amb la composició social dels centres educatius, apostéssim per una distribució que tendeixi a un escenari o l'altre.

Per tant, l'interès acadèmic d'aquest capítol rau en la voluntat d'aprofundir en les evidències empíriques relatives a l'impacte de l'efecte composició, tot apuntant les conseqüències reals que comportarien apostes d'intervenció que afavorissin diferents agrupacions d'alumnes (més homogènies o més heterogènies quant al seu estatus sociocultural). L'eina analítica que ens permet aquest aprofundiment és la projecció de dos escenaris, el segregat i el desegregat, que es configuren a partir de les dades que aporten diferents bases de dades estadístiques. Falta anunciar sobre quines bases de dades i sobre quin concepte d'èxit en els resultats acadèmics valorarem l'impacte hipotètic d'aproximar-nos a un o altre escenari.

Comencem per les bases de dades. L'anàlisi empírica que mostrem es basa en l'explotació de dues bases de dades diferents. La primera és la nova onada de dades de l'estudi PISA, corresponent a l'any 2009, que des de fa pocs mesos és a disposició de la comunitat acadèmica. És aquesta la quarta edició d'aquest conegudíssim estudi, basat en els resultats que obté una mostra significativa d'alumnes de diferents països i territoris, entre ells Catalunya, en l'assoliment de competències en matemàtiques, lectura i ciències. La segona base de dades correspon a l'enquesta elaborada en el marc de l'estudi *l'Educació postobligatòria a Catalunya. Eixos de desigualtat en les trajectòries formatives més enllà de l'ESO* (Subirats *et al*, 2010) (en endavant, enquesta EPC-2008). Aquesta enquesta va ser administrada a una mostra d'alumnes d'últim curs d'ESO, batxillerat, CFGM i CFGS, i inclou dades referents als seus resultats acadèmics (notes obtingudes durant el curs i finalització de l'etapa formativa) i a les seves expectatives acadèmiques futures. Per a la realització d'aquest capítol, s'ha emprat la submostra d'alumnes de quart d'ESO.

De totes dues bases de dades disposem dels resultats acadèmics dels alumnes i dels centres educatius de la mostra (puntuació en l'adquisició de competències en l'estudi PISA-2009, i nota mitjana de quart d'ESO en el cas de l'enquesta EPC-2008), així com del nivell d'estudis dels pares dels alumnes.[5] Per tant, l'anàlisi que presentem es basa en l'assoliment de competències en la prova PISA-2009 dels estudiants catalans de 15 anys i en les notes obtingudes pels alumnes de quart d'ESO de la mostra de l'enquesta EPC-2008.

Per tal que la projecció dels resultats acadèmics als dos escenaris sigui estrictament comparable i, efectivament, s'ajusti a la realitat de la xarxa escolar catalana, s'ha optat per ajustar cadascun dels escenaris a les dades del conjunt de la mostra. Mitjançant aquesta ponderació, dibuixem dos escenaris hipotètics, amb un nivell de segregació contrastat, però que, alhora, presenten la mateixa composició social: concretament, la composició social referent al conjunt de Catalunya.[6]

Finalment, falta explicar com conceptualitzem els resultats acadèmics i, a través d'aquesta conceptualització, quins considerem que són indicadors d'èxit escolar. Atenent al possible biaix ideològic a l'hora de decantar-nos per un sol ítem i a la voluntat de ser exhaustius en l'anàlisi, hem decidit establir quatre dimensions diferents de l'èxit escolar: l'equitat, la qualitat, l'eficàcia i l'excel·lència del sistema educatiu.

5. Concretament, la mostra d'alumnes de quart d'ESO de l'enquesta EPC 2008 amb què hem treballat està integrada per 2.195 alumnes de 51 centres educatius catalans. Per la seva banda, la mostra de les dades PISA amb què hem treballat està integrada per 1.331 alumnes de 47 centres educatius catalans (hem exclòs tres centres de la mostra inicial que presentaven un nombre baix d'alumnes). Certament, hauria estat preferible treballar amb bases de dades amb un major volum de centres, atès el tipus d'anàlisi que aquí plantegem. La inexistència d'altres bases de dades accessibles per al cas de Catalunya (amb una mostra més gran de centres) ha fet que optéssim per treballar amb aquestes dues bases de dades. Cal remarcar que, com a anàlisi de control, hem replicat alguns dels càlculs estadístics amb dades PISA de països amb un sistema educatiu similar al català (i amb una major mostra de centres) i hem obtingut resultats que van en la direcció dels que aquí presentem.

6. Concretament, hem ponderat a partir del pes de les següents variables en el conjunt de la mostra: sexe, capital instructiu familiar i procedència en el cas de l'enquesta EPC 2008, i sexe, capital instructiu, procedència i curs en què es troben els alumnes de 15 anys en el cas de les dades PISA-2009 (en aquest cas, s'ha optat per ponderar, també, el curs en què es troben els alumnes de 15 anys, atès que un desequilibri significatiu entre els dos escenaris podria tenir efectes sobre els seus resultats agregats).

Cadascuna d'aquestes dimensions és objecte d'atenció prioritària en els quatre apartats que es presenten a continuació, constitutius del cos analític del capítol. Per a cada indicador d'èxit escolar comparem els resultats que s'obtenen als dos escenaris projectats, de forma que estem en condicions de dir quin tipus de distribució de l'alumnat comporta composicions escolars que afavoreixen millors resultats i, per tant, major èxit del sistema educatiu.

Primera dimensió de l'èxit escolar: l'equitat

L'equitat és definida com un dels objectius principals, si no el primer, que ha de conquerir el nostre sistema educatiu, com queda explicitat en els preàmbuls de les principals lleis educatives.[7] És per això que considerem pertinent integrar-la com una dimensió principal en l'anàlisi de l'èxit escolar. En aquest sentit, l'escola té més èxit quan aconsegueix implementar l'equitat, entesa com el principi meritocràtic que fa que els individus no triomfin o fracassin en la seva trajectòria educativa per culpa dels bagatges culturals, acadèmics, econòmics o d'altra mena que hereten de les seves famílies d'origen. Altrament dit: com menys condicionat està el resultat acadèmic dels fills pel nivell instructiu dels pares, més èxit té l'escola en l'acompliment d'un dels seus objectius bàsics.

Les dades referents als dos escenaris educatius —l'un amb predomini dels centres socialment heterogenis (escenari desegregat) i l'altre amb predomini dels centres socialment homogenis (escenari segregat)— ofereixen una primera evidència empírica contundent: en l'escenari desegregat es redueixen les distàncies entre els resultats dels alumnes amb major i menor capital instructiu familiar. Com es pot observar a la taula 1, aquest efecte es produeix tant en relació amb la nota mitjana que obtenen els alumnes a quart d'ESO com en relació amb l'adquisició de competències.

L'índex d'iniquitat és una mesura sintètica de la distància existent entre els resultats dels alumnes amb pares universitaris, amb pares amb estudis postobligatoris i amb

7. Llei Orgànica 2/2006, de 3 de maig, d'educació i Llei 12/2009, del 10 de juliol, d'educació.

Taula 1.
Projecció dels resultats acadèmics segons el capital instructiu familiar sobre els escenaris segregat i desegregat. Catalunya, 2008 i 2009

Escenaris	Capital instructiu familiar	Enquesta EPC-2008	PISA 2009		
			Matemàtiques	Lectura	Ciències
		Nota mitjana*	Puntuació prova de competències		
Escenari segregat	Estudis obligatoris	1,45	454,0	470,4	460,5
	Estudis postobligatoris	1,74	483,5	492,8	499,2
	Estudis universitaris	2,22	538,2	524,6	519,4
	Diferència universitaris -obligatoris	*+0,77*	*+84,2*	*+54,2*	*+58,9*
	Diferència universitaris-postobligatoris	*+0,48*	*+54,7*	*+31,8*	*+20,2*
	Índex d'iniquitat**	**1**	**1**	**1**	**1**
Escenari desegregat	Estudis obligatoris	1,74	475,4	480,3	473,9
	Estudis postobligatoris	1,95	495,3	499,5	501,5
	Estudis universitaris	2,23	519,9	517,4	513,6
	Diferència universitaris -obligatoris	*+0,49*	*+44,5*	*+37,1*	*+39,7*
	Diferència universitaris-postobligatoris	*+0,28*	*+24,6*	*+17,9*	*+12,1*
	Índex d'iniquitat	**0,59**	**0,49**	**0,62**	**0,69**
Diferència entre escenaris	*Diferència universitaris -obligatoris*	*-0,28*	*-39,7*	*-17,1*	*-19,2*
	Diferència universitaris-postobligatoris	*-0,20*	*-30,1*	*-13,9*	*-8,1*

* Nota mitjana (entre 0 i 4) de les assignatures cursades a quart d'ESO.
** L'índex d'iniquitat fa referència a la distància existent entre els tres grups de capital instructiu familiar, situant com a valor 1 aquesta distància en l'escenari segregat. Quan l'índex se situa per sota del valor 1, presenta un nivell d'iniquitat inferior al de l'escenari segregat, mentre que quan se situa per sobre del valor 1 el nivell d'iniquitat és superior.
Font: Elaboració pròpia amb dades de l'enquesta EPC-2008 i del PISA-2009 de l'OCDE.

pares amb estudis obligatoris o inferiors. Mitjançant aquest índex volem contrastar el nivell d'iniquitat que s'observa en els dos escenaris. Per procedir al contrast, prenem l'escenari segregat com a referència, de forma que el seu valor, en l'índex d'iniquitat,

sempre és 1. Davant d'això, l'escenari desegregat apareix com a més equitatiu o més iniquitatiu en funció de si el valor del seu índex se situa entre el 0 i el 0,99 (més equitatiu) o per sobre de l'1 (menys equitatiu). Per acabar de copsar el sentit d'aquest valor hem de tenir present que l'obtenció d'un valor igual a 0 en l'índex d'iniquitat equivaldria a una situació de total anul·lació dels efectes tant individuals com de composició del capital instructiu familiar sobre el rendiment dels alumnes. D'aquesta manera, com més s'acosti el valor a 0, més equitatiu serà l'escenari.[8]

En relació amb la nota mitjana (dades de l'enquesta EPC-2008), el pas de l'escenari segregat a l'escenari desegregat implica una reducció notable de les diferències entre els tres grups de capital instructiu. Davant del valor 1 en l'índex d'iniquitat de l'escenari segregat, el valor que s'obté en l'escenari desegregat és substancialment inferior: 0,59. Concretament, la distància entre la nota mitjana (en una escala del 0 al 4[9]) dels alumnes amb major capital instructiu (pares universitaris) i els alumnes amb menor capital instructiu (pares amb estudis obligatoris o inferiors) passa de 0,77 en l'escenari segregat a 0,49 en l'escenari desegregat. Al seu torn, la distància entre els alumnes amb pares universitaris i els alumnes amb pares amb estudis postobligatoris també decreix, i passa de 0,48 a 0,28.

Observem pautes anàlogues en relació amb l'adquisició de competències (PISA-2009); el pas de l'escenari segregat al desegregat també duu associats guanys destacables en termes d'equitat. Concretament, tornant a situar l'escenari segregat com a situació de referència (valor 1), els índexs de l'escenari desegregat presenten un valor de 0,49 en matemàtiques, de 0,62 en lectura i de 0,69 en ciències. Novament, la distància entre els

8. Val a dir que l'obtenció del valor 0 resulta quimèrica, perquè implicaria l'anul·lació no només de l'efecte composició, sinó també dels efectes individuals del nivell d'instrucció familiar sobre el rendiment dels alumnes. Més enllà de considerar si aquesta anul·lació dels efectes individuals és desitjable o no, l'anàlisi d'escenaris només es pot proposar fins on és possible intervenir per a què l'efecte composició, dins del marc legal i polític actual, tingui el major efecte equitatiu possible. Per tant, en cap cas els escenaris poden aproximar-se al valor 0 en l'índex d'iniquitat. L'anul·lació dels efectes individuals sobre l'equitat requeriria un tipus d'intervenció en matèria educativa molt més controvertida i radical, relacionada amb una distribució dels recursos educatius molt més desigual que l'actual per ajudar sobretot els alumnes amb una situació de partida més desafavorida. No és l'objectiu d'aquest article valorar la pertinència ni les implicacions de tota mena d'una intervenció política d'aquesta índole.

9. 0 = insuficient, 1 = suficient, 2 = bé, 3 = notable i 4 = excel·lent.

resultats dels fills de famílies universitàries es redueix en relació amb els alumnes amb pares amb estudis obligatoris o inferiors (concretament, 39,7 punts en matemàtiques, 17,1 en lectura i 19,2 en ciències) i, també, respecte als alumnes amb pares amb estudis postobligatoris (una reducció de 30,1 punts, 13,9 i 8,1, respectivament).

Per tal de contextualitzar amb major precisió aquesta reducció de les diferències entre alumnes amb diferent capital instructiu, és necessari aturar-nos a observar quins són els «increments» i «decrements» que experimenten els diferents subgrups d'alumnes en el pas d'un escenari a l'altre. La reducció de les distàncies en l'escenari desegregat bé podria ser fruit exclusivament d'un increment dels resultats dels perfils instructius més baixos, o altrament també podria anar acompanyada d'un decrement dels resultats dels alumnes més capitalitzats.

La reducció de les diferències que aquí observem es produeix, principalment, per un major increment dels resultats dels alumnes menys capitalitzats (estudis obligatoris i postobligatoris). De fet, en relació amb la nota mitjana, els fills de famílies amb estudis obligatoris o inferiors experimenten un increment, en el pas de l'escenari segregat al desegregat, de 0,29 punts; els fills de famílies amb estudis postobligatoris de 0,21, i els fills de famílies amb estudis universitaris obtenen pràcticament els mateixos resultats en ambdós escenaris. Així doncs, el pas de l'escenari segregat al desegregat té beneficis importants —en termes de nota mitjana— per als alumnes menys capitalitzats, mentre que els alumnes més capitalitzats no obtenen uns resultats pitjors. En canvi, en relació amb l'adquisició de competències, els alumnes amb pares universitaris sí que experimenten un cert decrement de rendiment en el pas cap a l'escenari desegregat; un decrement, però, inferior a l'increment que, proporcionalment, experimenta la resta d'alumnes (i que en cap cas reverteix l'avantatge relatiu que aquests alumnes tenen per la seva posició individual com a fills de famílies amb un capital instructiu elevat).

Segona dimensió de l'èxit escolar: la qualitat

Molta gent no coincidiria amb nosaltres a considerar l'equitat una dimensió de l'èxit educatiu. Segons aquest punt de vista alternatiu, si la disminució de les desigualtats

no repercuteix en uns resultats acadèmics agregats millors, la millora de l'equitat es podria considerar un fracàs. De fet, és un lloc comú en alguns corrents de pensament normatiu suposar que l'aposta per la millora de l'equitat, i la igualació de resultats que comporta, té sempre associat un impacte negatiu sobre els resultats educatius agregats. Ras i curt: el cost de l'equitat és que fa l'escola més mediocre.

La segona de les dimensions, la qualitat educativa, ens permet contrastar si, efectivament, els resultats dels alumnes empitjoren sistemàticament amb els guanys en equitat. La qualitat educativa la recollim a partir del resultat mitjà que obtenen els alumnes tant en l'escenari segregat com en l'escenari desegregat, tant en relació amb les competències (PISA-2009) com en relació amb les notes (EPC-2008). Aquest rendiment mitjà ens permet comparar la qualitat educativa tal i com s'acaba de concretar en els dos escenaris, a través d'un indicador senzill i entenedor.

Si bé els efectes d'aquests escenaris sobre l'equitat educativa podrien ser en certa mesura previsibles (sobre la base d'altres recerques que, com hem assenyalat en la introducció, han apuntat en aquesta direcció), la lectura en termes de qualitat ofereix uns resultats més sorprenents. Com s'observa a la taula 2, tant en relació amb la nota mitjana com amb l'adquisició de les tres competències instrumentals de PISA l'escenari desegregat ofereix uns resultats mitjans del conjunt de l'alumnat superiors als de l'escenari segregat. Per tant, més enllà dels (previsibles) beneficis en termes d'equitat, una reducció hipotètica del nivell de segregació de la xarxa escolar podria tenir també beneficis sobre la qualitat del sistema educatiu.

Convé matisar que es tracta d'uns beneficis que, si bé es repeteixen en les quatre variables dependents emprades, presenten una magnitud més aviat modesta: concretament, un increment de la nota mitjana d'un 0,14 (EPC-2008) i uns increments de 4,5, 4 i 2,5 punts en l'escala de puntuació en competències de matemàtiques, lectura i ciències respectivament (PISA-2009). Ara bé, malgrat la modèstia de la intensitat, el fet que en el pas a l'escenari desegregat no es produeixi un descens del rendiment mitjà contradiu alguns dels arguments que s'han anat esgrimint en contra de les polítiques en favor d'una distribució equilibrada de l'alumnat. Com ja hem apuntat, sovint s'ha acceptat que aquest tipus de polítiques podrien contribuir a reduir una part de les desigualtats

Taula 2.
Projecció dels resultats acadèmics mitjans sobre els escenaris segregat i desegregat. Catalunya, 2008 i 2009

Escenaris	Enquesta EPC-2008	PISA 2009		
		Matemàtiques	Lectura	Ciències
	Nota mitjana*	Puntuació prova de competències		
Escenari segregat	1,86	494,0	497,6	496,1
Escenari desegregat	2,00	498,5	500,6	498,6
Diferència entre escenaris	+0,14	+4,5	+3	+2,5

* Nota mitjana (entre 0 i 4) de les assignatures cursades a quart d'ESO.
Font: Elaboració pròpia amb dades de l'enquesta EPC-2008 i del PISA-2009 de l'OCDE.

educatives de partida, però, al mateix temps, s'ha destacat que aquests beneficis anirien acompanyats de perjudicis importants sobre la «qualitat» del sistema educatiu.

La rellevància dels resultats que aquí es presenten, doncs, no rau tant en la magnitud dels increments del rendiment mitjà com en el fet que contradiuen aquestes argumentacions basades en un joc de suma zero entre els beneficis i els costos de les polítiques desegregadores (en els terrenys de l'equitat i la qualitat educatives). Per tant, sobre la base d'aquests resultats podem assegurar que els contextos escolars socialment heterogenis no tindrien implicacions negatives sobre la qualitat del sistema educatiu —si més no a Catalunya—; ans el contrari, en aquests contextos el rendiment mitjà de l'alumnat tendiria a incrementar-se.

Tercera dimensió de l'èxit escolar: l'eficàcia

Les dimensions d'eficàcia i excel·lència aporten profunditat als resultats que obtenim en la dimensió de qualitat.[10] Mitjançant la dimensió de l'eficàcia ens aproximem a

10. En les dues dimensions anteriors, equitat i qualitat, ens aproximàvem a una mateixa dada de referència: les qualificacions mitjanes dels estudiants, ja fossin les qualificacions agregades (qualitat) o per cada

l'èxit que s'obté en els dos escenaris projectats no pas en relació amb les qualificacions mitjanes, sinó en relació amb els llindars de qualificació de mínims que el sistema educatiu hauria de garantir per a tot l'alumnat. Ens proposem, doncs, destriar quin dels dos escenaris és més eficaç a l'hora de garantir aquest llindar mínim de qualificacions per al màxim nombre d'alumnes possible.

Per tal d'acomplir aquest propòsit hem elaborat dos indicadors d'eficàcia de naturalesa diferent, però alhora complementària. En primer lloc, i partint de les dades de l'enquesta EPS-2008, hem calculat el percentatge d'alumnes que han suspès més de dues assignatures a quart d'ESO en cadascun dels dos escenaris. Aquesta dada ens ofereix una lectura en clau d'èxit escolar de primera magnitud, atès que el llindar entre la graduació i la no graduació en ESO se situa tot sovint en les dues assignatures suspeses.[11] En segon lloc, hem calculat a partir de les dades PISA-2009 el percentatge d'alumnes que a cada escenari assoleix unes competències en matemàtiques, lectura i ciències que se situen per sota del llindar «mínim» de competències.[12]

Com s'observa a la taula 3, l'escenari desegregat és el que presenta un percentatge menor d'alumnes situats tant per sota del llindar de graduació de l'ESO com per sota del llindar «mínim» de competències. Concretament, en l'escenari desegregat un 11,6% dels alumnes de quart d'ESO suspenen més de dues assignatures, mentre que en l'escenari segregat aquesta xifra és del 15,5%, cosa que representa un decrement

nivell d'instrucció familiar (equitat). En les dimensions d'eficàcia i excel·lència, que volen complementar la dimensió relativa a la qualitat, només fem esment a resultats agregats. Amb tot, també seria possible fer una aproximació a l'anvers equitatiu de les dues dimensions, tot veient què passaria per cada nivell d'instrucció familiar sobre l'eficàcia i l'excel·lència. La longitud d'aquest capítol no fa possible entrar-hi, però val a dir que les dades relatives a «l'equitat en l'eficàcia» i «l'equitat en l'excel·lència» són igual de contundents que les que hem vist en la dimensió de l'equitat (complementària a la dimensió de la qualitat): l'escenari desegregat mostra nivells d'èxit considerablement superiors.

11. Que els alumnes obtinguin o no la graduació en ESO no depèn directament del fet de no suspendre més de dues assignatures, sinó que té a veure amb les decisions que prenguin les juntes d'avaluació i els claustres de cada centre educatiu. Amb tot, no és infreqüent que la decisió d'aquests òrgans sigui favorable a la superació de l'ESO quan un alumne suspèn dues assignatures.

12. L'estudi PISA-2009 fixa sis trams de rendiment per a cada matèria. Hem considerat com a llindar «mínim» de competències la superació del segon nivell; això és, una puntuació de 420 en matemàtiques, de 407 en lectura i de 410 en ciències.

Taula 3.
Projecció d'indicadors d'*eficàcia* sobre els escenaris segregat i desegregat. Catalunya, 2008 i 2009

Escenaris	Enquesta EPC- 2008	PISA 2009		
		Matemàtiques	Lectura	Ciències
	% alumnes més de 2 assignatures suspeses	% d'alumnes puntuació < 420	% d'alumnes puntuació < 407	% d'alumnes puntuació < 410
Escenari segregat	15,5%	19,9%	14,1%	17,6%
Escenari desegregat	11,6%	17%	11,9%	14,9%
Diferència entre escenaris	*-3,9%*	*-2,9%*	*-2,2%*	*-2,7%*

Font: Elaboració pròpia amb dades de l'enquesta EPC-2008 i del PISA-2009 de l'OCDE

del 25,2% en el pas de l'escenari segregat al desegregat. Per la seva banda, en relació amb les proves PISA-2009, un 19,9%, un 14,1% i un 17,6% dels alumnes de l'escenari desegregat no superen el llindar mínim de competències en matemàtiques, lectura i ciències respectivament. En l'escenari segregat aquests percentatges són del 17%, l'11,9% i el 14,9%. Aquesta doble lectura del volum d'alumnes que no assoleixen els llindars mínims de qualificacions que el sistema hauria de garantir posa de manifest, per tant, que és l'escenari desegregat el que presenta una major potencialitat per tal de minimitzar el pes d'aquest grup d'alumnes i, d'aquesta forma, incrementar el nivell d'eficiència del sistema educatiu.

Quarta dimensió de l'èxit escolar: l'excel·lència

Finalment, la darrera de les dimensions, l'excel·lència, fixa l'atenció en el que podríem considerar, en contraposició amb la dimensió de l'eficàcia, el llindar dels alumnes que excel·leixen dins de l'educació obligatòria. És la dimensió que fa possible evidenciar quin dels dos escenaris té més èxit en la potenciació de l'excel·lència educativa, entesa en aquest cas com l'assoliment de nivells superiors de competències. En aquest cas, hem

establert dos llindars d'excel·lència diferenciats, en tots dos casos a partir de l'estudi PISA-2009: el primer marca el llindar d'assoliment d'una excel·lència moderada, i el segon un llindar d'excel·lència elevada.

El llindar d'excel·lència elevada l'hem fixat en els dos trams superiors quant a l'assoliment de competències que fixa l'estudi PISA-2009 per a matemàtiques (això és, obtenir una puntuació superior a 607), lectura (626) i ciències (633). Ens situem, doncs, en la franja de competències més elevada, unes competències que tan sols assoleix un grup força minoritari d'alumnes. El segon llindar, d'excel·lència moderada, incorpora també aquells alumnes que assoleixen un tram de rendiment immediatament inferior; en aquest cas superen una puntuació de 545 en matemàtiques, de 553 en lectura i de 559 en ciències. Ens situem, en aquest cas, davant d'un llindar d'excel·lència que incorpora aproximadament la quarta part d'alumnes amb un nivell de competències més elevat (inclòs el reduït grup d'alumnes que supera el llindar d'excel·lència elevada).

Taula 4.
Projecció d'indicadors d'*excel·lència* sobre els escenaris segregat i desegregat. Catalunya, 2009

Escenaris	PISA 2009					
	Matemàtiques		Lectura		Ciències	
	% alumnes *excel·lència moderada* (puntuació > 545)	% alumnes *excel·lència elevada* (puntuació > 607)	% alumnes *excel·lència moderada* (puntuació > 553)	% alumnes *excel·lència elevada* (puntuació > 626)	% alumnes *excel·lència moderada* (puntuació > 559)	% alumnes *excel·lència elevada* (puntuació > 633)
Escenari segregat	29,7%	10,9%	25,9%	4,8%	25,4%	5,4%
Escenari desegregat	30,6%	9,5%	27,1%	3,3%	25%	4,1%
Diferència entre escenaris	*+0,9%*	*-1,4%*	*+1,2 %*	*-1,5%*	*-0,4 %*	*-1,3%*

Font: Elaboració pròpia amb dades del PISA -2009 de l'OCDE.

Si en relació amb les tres dimensions d'anàlisi anteriors —equitat, qualitat i eficàcia— observàvem beneficis sistemàtics de l'escenari desegregat en contraposició a l'escenari segregat, en aquest cas els resultats són menys contundents. Com s'observa a la taula 4,

tant en matemàtiques com en lectura i en ciències el percentatge d'alumnes situats en aquesta franja d'excel·lència «de màxims» és superior en l'escenari segregat. Concretament, el decrement en el pas de l'escenari segregat al desegregat se situa en un 1,4%, un 1,5% i un 1,3% respectivament.

Per contra, si focalitzem l'anàlisi en el llindar d'excel·lència moderada, observem que el percentatge d'alumnes que hi trobem és superior en l'escenari segregat per al cas de ciències, però en canvi en matemàtiques i lectura l'escenari desegregat presenta un percentatge més elevat d'alumnes (d'un 0,9% i 1,2% major respectivament). Així doncs, els beneficis en termes d'eficàcia no es reprodueixen en el tram d'excel·lència més elevat, però en canvi en fixar-nos en un llindar d'excel·lència més moderat els resultats tendeixen a presentar una situació lleugerament millor en l'escenari desegregat.

Conclusions per a la política educativa

La comparació dels resultats en les diferents dimensions de l'èxit del sistema escolar entre els escenaris segregat i desegregat permet fer una aproximació propositiva a l'efecte composició. El contrast d'escenaris no només ratifica l'existència de l'efecte composició, sinó que permet plantejar alternatives realistes de distribució de l'alumnat que podrien tenir impactes en termes de millora de l'èxit escolar. Els escenaris segregat i desegregat dibuixen posicions representatives d'un volum no minoritari dels centres escolars de la mostra, de forma que, més que dibuixar situacions ideals, representen possibilitats de distribució d'alumnes a què es podria aspirar mitjançant la intervenció pública.

Els resultats són concloents a favor de l'escenari desegregat, i a més es veuen reforçats per l'elevada congruència existent entre les dues bases de dades amb què hem treballat. Malgrat això, és ben possible que els resultats no recullin del tot la magnitud real del contrast, atès que la projecció d'escenaris no pot neutralitzar la diferència de recursos educatius disponibles en un i altre escenari, que possiblement sigui favorable al segregat (quelcom que n'inflaciona «artificialment» els indicadors d'èxit). En l'escenari segregat és on possiblement es concentren centres amb més recursos (millors ràtios de

professors, més hores lectives, etc.), ja sigui perquè hi trobem centres elitistes amb molts recursos, ja sigui perquè, en sentit contrari, hi trobem escoles en situacions especialment desafavorides que solen ser objecte d'actuacions educatives preferents. Per tant, si el nostre model pogués corregir aquesta desigualtat quant a recursos disponibles, amb tota probabilitat els resultats d'èxit serien encara més favorables a l'escenari desegregat.

En contra del que ha arribat a esdevenir un lloc comú, l'èxit d'una distribució de l'alumnat propera a l'escenari desegregat no només es traduiria en la dimensió de l'equitat a través d'un major equilibri en els resultats dels diferents grups d'alumnes amb nivells acadèmics dels pares diferents. Certament, l'èxit que s'obté en l'escenari desegregat en termes d'equitat és notable, però igual de rellevant és que això no comporta una pèrdua equiparable en termes de qualitat, d'eficàcia o d'excel·lència. Més aviat succeeix el contrari.

En relació amb la dimensió de la qualitat, l'escenari desegregat mostra millors resultats que l'escenari segregat, tant pel que fa a les notes mitjanes obtingudes pels alumnes com, de forma més atenuada, a l'assoliment mitjà de competències tant en matemàtiques com en lectura i ciències. En la dimensió relativa a l'eficàcia els resultats són més contundents, perquè els percentatges d'alumnes que assoleixen els nivells mínims de qualificacions o competències en l'escenari desegregat superen a bastament els de l'escenari segregat. Finalment, ni tan sols els indicadors relatius a l'excel·lència educativa són inequívocament favorables a l'escenari segregat, com hom podria suposar. Així, l'excel·lència moderada tendeixen a assolir-la un volum una mica major d'alumnes en l'escenari desegregat. Només en relació amb l'excel·lència elevada, que redueix el volum d'alumnes «excel·lents» a una petita minoria, l'escenari segregat mostra resultats una mica millors que l'escenari desegregat en dues de les tres matèries avaluades a l'estudi PISA.

Com dèiem a l'inici del capítol, aquests resultats se centren en l'anàlisi de l'*efecte composició*, i mostren com unes polítiques de distribució de l'alumnat afavoridores de realitats heterogènies dins de cada centre escolar i homogènies entre uns i altres centres poden tenir efectes positius tant en termes d'equitat educativa com, també, en termes d'èxit escolar. Lògicament, les polítiques d'escolarització equilibrada no poden neutralitzar el conjunt de desigualtats educatives del sistema ni assolir, per si

soles, uns resultats globals extraordinàriament superiors. Ara bé, aquestes polítiques, alhora que generen guanys importants per a les famílies i els alumnes en termes de justícia social —pel fet que els resultats escolars no depenen tant de si l'alumne és escolaritzat en un o altre centre— i contribueixen a equiparar les condicions de partida amb què ha de treballar el professorat, també poden contribuir a reduir una part de les desigualtats educatives i a incrementar els nivells d'èxit escolar.

A més, aquestes polítiques no interfereixen en els guanys que, en termes d'èxit escolar, es podrien obtenir a través de totes aquelles intervencions que recollim sota el paraigües conceptual de l'*efecte procés*. Ans al contrari: com hem defensat en un altre escrit, aquestes polítiques de distribució desegregadora possiblement afavoririen un increment de l'efectivitat de certes polítiques pedagògiques o organitzatives dels centres (Benito i Gonzàlez, 2010). Per exemple, certes polítiques focalitzades en realitats altament desafavorides són més senzilles i efectives si es redueixen al mínim possible les escoles altament desfavorides, mitjançant polítiques de (re)distribució de l'alumnat. Alhora, no seria impensable, si es considerés necessari, posar en marxa polítiques educatives de potenciació del talent orientades als alumnes que més excel·leixen, un grup d'alumnes que, en escenaris desegregats, probablement no serien tan sistemàticament els que provenen d'entorns culturals privilegiats. D'aquesta forma, es podria corregir i replantejar en termes socialment més justos l'únic aspecte de l'èxit escolar en què l'escenari desegregat mostra certa feblesa comparativa davant de l'escenari segregat.

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Publicació F

Títol: Measures and determinants of student body socioeconomic diversity: evidence from Spain

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Measures and Determinants of Student Body Socioeconomic Diversity: Evidence from Spain

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This article deals with the debate on the assessment of pupils socio-economic dispersion among schools. First, the paper complements the traditional way of measuring "segregation," which refers to the distribution of a specific subgroup of pupils across different schools, by introducing a new measure which we call "school polarization level." As argued here, "school segregation" and "school polarization" are associated with different phenomena and so point to different problems with different policy implications. Second, the paper illustrates the application of such measures for the cases of 10 Catalan municipalities (Spain) that apply different policies of school assignment based on residence (school zoning).

KEYWORDS school segregation, school polarization, school zoning, school choice

INTRODUCTION

Since the publication of the influential Coleman report (1966), numerous studies have corroborated the idea that school composition has significant effects on the academic outcomes of pupils and schools. Some of them focused their analysis on the influence of the socioeconomic profile of classes and schools (Caldas & Bankston, 1997; Willms, 1986), others on the net effects attributable to ethnic composition (Hanushek, Kain, & Rivkin, 2002; Dronkers & Levels, 2007), and others on the aggregated and asymmetric

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impacts of ability composition in different school contexts (De Fraine, Van Damme, Van Landeghem, & Opdenakker, 2003; Opdenakker & Van Damme, 2001). Most of these studies have also confirmed that the effects of school composition on students' outcomes are far more significant than those variables related to different pedagogic and organisational processes (Dumay & Dupriez, 2008; Thrupp, 1999).[1]

As stated by most of the studies, the impact of school composition is still considerably smaller than the effect attributed to students' backgrounds at an individual level (Gorard, 2006), although it does exist, and does tend to be noteworthy. Of even greater importance is that this is a salient issue that educational policy can deal with, more specifically through regulations that affect the dynamics of school access. Thus, both discussing how to measure the patterns of student distribution across schools and analyzing its relationship with such public regulations are particularly relevant to the policy debate concerned with the principles of real equity and equality of opportunities in education.

A number of studies focused on the relationships between the introduction of quasi-market procedures in the educational field and the varying levels of "school segregation." Factors such as the presence of private schools (more or less publicly funded) (Dronkers & Robert, 2008; Saporito & Sohoni, 2007), the existing margin for school autonomy (Wöbmann, Lüdemann, Schütz, & West, 2007), the introduction of diverse forms of specialist schools (Milliman, Maranto, & Gresham, 2004; Garcia, 2008), or the introduction of school vouchers schemes (Clowes, 2008; Ladd, 2002) have been considered in the assessment of such relationships. Here, a quick review of the conclusions reached by the literature would indicate that the effects of quasi-market policies on segregation are rather ambiguous.

For instance, in terms of the delimitation of school catchment areas, various studies conclude that certain zoning policies, in practice, tend to reproduce social and ethnic residential separation at the school level (Gorard, Taylor, & Fitz, 2003; Hoxby, 2004). At the end of the day, it is within school choice schemes that low-intake or ethnic minority students are given a real margin for choosing schools, as they benefit from the removal of specific barriers blocking their choice, such as "economic selection" or "selection by mortgage." In this sense, open choice schemes should lead toward a decrease in school segregation (Godwin & Kemerer, 2002, Schütz, West, & Wößmann, 2007). On the contrary, a number of studies have shown that middle-class native families tend to find themselves in a position with more opportunities to benefit from open choice settings, which tends to reinforce processes of social and ethnic school separation (Ball, 2003; Noreisch, 2007; Raveaud & Van Zanten, 2007). Factors such as a higher level of social and cultural capital, strategic key competences, or institutional relation skills, and more access to "contrasted" information, together with an economic position that facilitates the payment of transport

costs or certain school fees, may help to explain the reasons behind such a privileged position.

PURPOSE OF THE STUDY

First, this article deals with the debate concerning the assessment of school segregation. We use the term "segregation" to mean the uneven distribution of specific groups of pupils characterized by specific variables (in our case, parental educational capital) between schools in a given territory (in our case, the municipality). This definition refers to a de facto situation, not to an intended school policy to allocate pupils' diversity. Focusing on this issue is crucial since the social composition of schools—and, thus, the extent to which the distribution of different student groups among schools is even or uneven—contributes significantly to the explanation of inequalities among students' learning opportunities.

More specifically, the paper tries to complement the traditional way of measuring segregation by introducing a new measure of school polarization. As will be described, these new indexes focus on the distribution of a subgroup of pupils across the minority group of schools that enroll the highest and lowest numbers of the same subgroup in a given school map. As argued here, "school segregation" and "school polarization" are associated with different phenomena and so point to different problems that require different approaches and that will have different policy implications.

Second, the paper illustrates the application of such measures at a local level. We assess the dynamics of "segregation" and "polarization" existing in various Catalan municipalities that apply different zoning policies (course 2005–2006). This empirical exercise is linked to the discussion of the possible relations between such dynamics and the local modalities of school zoning.

It is evident that at the local level there are multiple factors that can condition patterns of student distribution across schools, from contextual variables (the structure of the school network, socio-urban segregation, size of the city and proximity to other municipalities, roles and actions of certain public bodies that regulate access to schools, etc.) to procedural or subjective factors (family strategies, shared images about certain schools, etc.). Nevertheless, the empirical work we present here, beyond exemplifying the usage of segregation and polarization measures, allows us to illustrate recurring situations that indicate possible interactions between zoning models and levels of segregation/polarization. We should emphasize, however, that given the small sample involved in this exercise, we cannot suggest causal relationships between the two variables, although we will highlight any salient associations that are visible at a descriptive level.

MEASURING SCHOOL SEGREGATION (AND POLARIZATION)

In order to analyze the distribution of a specific subgroup of pupils across schools, we deal here with two measures that permit a comparable approach: the "dissimilarity index" (Duncan & Duncan, 1955) and the "school polarization level." The former is probably the most popular of segregation indexes, and it has been used and discussed in numerous studies focusing on this issue. The latter, as described here, facilitates an analysis of those schools with the largest and smallest percentages of a specific subgroup.

School Dissimilarity Index (Segregation)

As has been stated, the Duncan dissimilarity index does not entirely satisfy a property that is widely agreed to be important for segregation indexes: the "transfer principle." This states that if a student with a low social position moves from a school that has a higher share of children with a low social position to a school with a lower share, then overall segregation must fall. Strictly, the dissimilarity index does not meet this principle in its "strong form," meaning that it does not distinguish between movements between two schools if both schools are above or below the local average proportion of the subgroup in consideration. However, it does capture pupil movements from schools with more than their "fair share" of pupils from a certain subgroup to schools with less than their "fair share" of pupils from that subgroup (the "weak form"; Allen & Vignoles, 2007). Beyond being probably the most familiar segregation index to researchers, the rationale for using dissimilarity is twofold. First, dissimilarity does meet a set of generally agreed on basic properties reasonably well (Hutchens, 2004). Second, it is closely related to the polarization formula and values that we discuss in the paper and therefore seems to allow for a fairer comparison with new measures.

The school dissimilarity index (D) assesses the evenness or unevenness of the distribution of a certain subgroup of pupils across different schools. We use this index as a measure of the segregation of different subgroups of pupils across the schools located in a given municipality. The formula is:

$$D = 0.5 \times \sum_{i=1}^{S} \left| \left(\frac{A_i}{X} \right) - \left(\frac{B_i}{Y} \right) \right|$$

Here, A_i and B_i are, respectively, the number of pupils in the selected subgroup (for instance, the number of students from families with postcompulsory education) and the rest of pupils (majority) in each school. X and Z are,

respectively, the total number of students in the minority and majority groups in all the schools considered in the analysis (for our purpose, the total number of schools in each municipality).

Possible values for *D* vary between 0 and 1, where a value of 0 represents a completely even distribution of the subgroup among schools and a value of 1 represents maximum segregation. The resulting measures of *D* may be interpreted as the fraction of pupils of the selected group that would need to change to different schools in order to ensure an even distribution.

School Polarization Level

As will be utilized here, school polarization measures assess the distribution of a certain subgroup of pupils across the 20% of schools with the largest and smallest proportion of these pupils in a given municipality. Consequently, school polarization is compounded by two indexes: the index of overconcentration (*OC*), and the index of underconcentration (*UC*). To give a real sense of the level of school polarization, the two measures should be reported together.

It is worth underlining that those indexes are not measures of dissimilarity among a certain set of schools, nor are they measures of unevenness placing greater weight on particularly "advantaged" and "disadvantaged" schools (as some generalized entropy measures of segregation do). Local school polarization indexes measure the extent to which the average share of pupils from a specific group enrolled at certain schools—those schools in the municipality with the highest and lowest concentrations of such these pupils—deviates from the total share of such students that each municipality houses, and this is standardized by the maximum number of places (school size) available at this subgroup of schools.

The information provided by the level of polarization allows us to complement the approach to school segregation that is offered by the dissimilarity index. While the latter can be seen as a measure of the overall level of segregation, the indexes of over- and underconcentration focus on the minority group of schools that enroll the highest and lowest numbers of a given subgroup of pupils in a given municipality. Indeed, school segregation (measured by the dissimilarity index) and school polarization (measured by the concentration indexes) may be associated with distinct morphologies of pupil distribution, where the first captures the general patterns of pupil distribution across schools and the second focuses on the distribution of pupils within the two opposite ends of the school map. As will be described in the empirical section, we find municipalities with high levels of polarization that present low levels of school segregation and vice versa.

As previously mentioned, the dissimilarity index is not sensitive to certain real changes in the general morphology of school segregation. On

the contrary, polarization measures provide key information on specific patterns of such morphologies of school segregation—those patterns of pupil distribution within schools that enroll the highest and lowest numbers of the subgroup in consideration. From this standpoint, the interest in complementing the measures that the dissimilarity index provides with the measures that polarization indexes assess would be justified.

With regard to school polarization measures, it should be pointed out that, in a given municipality, the over- and underconcentration of a specific subgroup of students do not necessarily act in a complementary way. For instance, one may find that the specific subgroup is not significantly concentrated in those schools with the highest percentage of pupils from the same subgroup, while the subgroup is totally absent at the other edge of the school map.

The ends we refer to are composed of the 20% of schools with the largest and smallest proportion of a given subgroup of pupils in a given municipality. We use this cutoff point in order to satisfy the following premise: to include a small number of schools in the sum of both edges so that we may still interpret them as extreme cases and deal with a threshold high enough to permit the inclusion of a number of schools that can be representative of the local school map, even in the case of those municipalities with a small number of schools overall.

The formulae of the indexes of school polarization level are the following.

INDEX OF OVERCONCENTRATION

$$OC = \frac{\left(\frac{C}{D}\right) - \left(\frac{X}{Z}\right)}{\left(\frac{C\,\max^{a}}{D}\right) - \left(\frac{X}{Z}\right)}$$

[a]If $X \geq D$, then Cmax = D, whereas if $X < D$, then Cmax = X.

C is the number of pupils from a specific subgroup attending the quintile of schools with the largest percentage of pupils from the same subgroup, while *D* represents the total number of pupils at this quintile of schools. *X* and *Z* are, respectively, the total number of students in the selected group and the overall number of pupils in all of the schools in the municipality. *Cmax* represents the maximum number of pupils from the subgroup that, in each municipality, could be enrolled at the quintile of schools with the largest percentage of pupils from the same subgroup. Possible values for *UC* range from 0 to 1. A value of 0 represents a completely even distribution of the subgroup across the 20% of schools with the largest proportion of these

pupils, while a value of 1 indicates a maximum concentration of the subgroup at the 20% of schools under consideration.

INDEX OF UNDERCONCENTRATION

$$UC = \frac{\left(\frac{E}{F}\right) - \left(\frac{X}{Z}\right)}{\left(\frac{E\,\min^{b}}{F}\right) - \left(\frac{X}{Z}\right)}$$

[b]If (G) = number of pupils at schools outside of the quintile of schools with the lowest proportion of pupils from the subgroup under consideration, then: When X ≤ G, then Emin = 0. When X > G, then Emin = X – G.

E is the number of pupils from a specific subgroup attending the quintile of schools with the lowest percentage of pupils from the same subgroup, while *F* represents the total number of pupils at this quintile of schools. *X* and *Z* are, respectively, the total number of students in the selected group and the overall number of pupils in all the schools considered in the analysis. *Emin* reflects the minimum number of pupils from the subgroup that, in each municipality, could be enrolled at the quintile of schools with the lowest percentage of pupils from the same subgroup. Values of *LD* range from 0 to –1. A value of 0 represents a completely even distribution of the subgroup across the 20% of schools with the lowest proportion of these pupils, while a value of –1 indicates the maximum absence of the subgroup at the 20% of schools under consideration.

PUTTING SEGREGATION AND POLARIZATION MEASURES INTO PRACTICE

This section aims to illustrate the application of measures of segregation and polarization for the various cases of Catalan municipalities applying different zoning policies.

Context of the Study

SCHOOL ACCESS CRITERIA IN CATALONIA

The Ley Orgánica del Derecho a la Educación (Organic Law on the Right to Education, LODE) of 1985 established a model for access to public and private publicly funded schools (private dependent) that subordinated

freedom of choice to the availability of places. Families can preregister their children for any school in their municipality, and private dependent schools, which represent almost 90% of all private schools and almost 40% of the total number of schools, are not allowed to charge students tuition fees. In the event of oversubscription, the law establishes three basic criteria for the prioritization of admission: siblings at the school of choice, level of income, and residential proximity to the school. The autonomous communities (regions) are responsible for establishing the grounds for these criteria and applying those that they consider most appropriate. In Catalonia, the latest official policy statement on enrolment (DdE, 2007) establishes the following general criteria for prioritizing school admissions: having siblings at the chosen school or working there (40 points), living in the school's catchment area or the parents' place of work being located in it (20 points), living in the same municipality as the chosen school but not in its school catchment area (10 points), mother or father receiving a minimum public income (10 points), and any member of the family having a level of disability equal to or greater than 33% (10 points).

Only in oversubscribed schools, places are assigned to pupils with the highest scores according to these criteria, while pupils with fewer points are reassigned to other schools with available places. It is worth underlining that, legally, no school, whether public or private dependent, has any margin of autonomy to select its pupils. Considering that the proximity criteria affect all families, we should see the delimitation of schools' catchment areas as an important aspect in the process of school choice/assignment.

Models of school zoning in Catalonia

We shall now briefly outline the main characteristics of the three most common models of school zonification used in Catalonia (Bonal, Gonzàlez, & Valiente, 2005):

1. *Single zone.* This is a model in which all schools in the municipality, both public and publicly funded private schools, share the same catchment area. This model is common in small municipalities where there are a small number of schools. Theoretically, this model permits families of a very low socioeconomic status—thanks to the income level criterion—to score highly in their registration request, regardless of which school they choose. Integrating private dependent schools in the catchment area neutralizes the possibility of a "flight effect" of some families from their neighboring public school. Indeed, families (above all, middle-class families), depending on the characteristics of the local school network can see private dependent education as an opportunity to avoid socially disadvantaged public schools. Although private dependent schools are not allowed to charge students tuition fees, the practice of charging families

for students' extracurricular activities is widespread among these schools. Such practices, together with other informal cream-skimming practices during the period of preregistration that have also been reported (Carbonell & Quintana, 2003), explain why private dependent schools tend to have a wealthier school population than public schools. In sum, single zone models tend to moderate such "school flight" processes, as the whole range of public and private schools is equally available to all families in the municipality. The main difficulty in implementing this model is that, depending on the size of the municipality, it can clash with the principle of proximity to the school, which the law stipulates for any local regulation relating to school access.

2. *School area*. Here, each public school has its own student recruitment area, with an alternative zoning for private dependent schools. This is a common situation among medium-sized municipalities. This model facilitates local authorities' allocation plans as well as family predictability, and it is also in line with the criterion of proximity of the school to a pupil's home. The main problem with this type of zoning is that when a highly stigmatized school is assigned an area where middle-class families reside, a number of them will tend to seek strategies to move toward private schools where, due to their alternative recruitment areas, they can obtain a high score.
3. *Multiple zones*. This is a typology where more than one public school and, sometimes, also more than one private dependent school share the same catchment area. This model is usually applied in the big cities. Whether private dependent schools share the same catchment areas with public schools or not depends on the number and location of private dependent schools, not on the fact that they are treated differently (in legal terms) than any other school that receives public funding. This model is midway between the two previous examples and demonstrates many of the advantages and disadvantages of each. In general terms, it is more similar to the single area model. However, considering the criterion of proximity to the school, it is flexible only to the point that it can integrate only a limited number of schools.

Sample

Our study considers the cases of 10 Catalan municipalities. This is obviously not a statistically representative sample of all the Catalan municipalities. Nevertheless, we think that both the intralocal analysis and the intermunicipal comparison carried out illustrate some regularities (and particularities) that could indicate possible relations between zoning models and patterns of social school composition.

The selection of cases aims to account for municipalities that show variation with regard to two basic variables: the school zoning model and

the size of the municipality (see Table the Appendix).[2] It is worth noting that, with the exception of Municipality H (that has a preprimary independent school), the school networks of all of the municipalities under consideration are made up of public and private dependent schools, and, therefore, of schools affected by the same public criteria for school access. In other words, distinct enrollment patterns observable between public and private dependent schools cannot be a consequence of schools applying distinct legal procedures for student admission. With respect to school access, the only circumstance that can diversely affect public and private dependent schools is whether the latter are included in the same catchment areas of public schools.

Beyond the comparative analysis of the municipalities, we assess the impact of a change of model within two municipalities: in Municipality C, from a school area model to a multiple zone model, and in Municipality F, from a school-area model to a single zone model. Thus, the final sample includes four single zone models, five school area cases, and three cases of multiple zones.

Data and Variables

In Spain, education is compulsory from 6 to 16 years of age. The preprimary stage, from 3 to 5 years old, is not compulsory, but it is "universal" in nature, and attendance rates at this stage are almost 100%. This stage comprises the academic years of P3, P4, and P5, which correspond to 3, 4, and 5 years of age, respectively. For our research we use data resulting from a brief questionnaire administered in 2005 to all families with children at stage P3 at school in the 10 selected municipalities. In the case of Municipalities C and F, the questionnaire was administered to families with children in different school years in order to detect possible effects of the reform of their school zoning model. In both municipalities the questionnaire was administered to families of P3 pupils (accounting for the moment when the new zoning model came into effect) and to families of P5 pupils (to account for the pupils that began their universal schooling in the frame of the old zoning model).

The questionnaire gathered data on pupils' social and ethnic background. The results presented here focus on data referring to the level of the parents' education. In assessing this factor, we opted for the highest credential reached by either of the two parents (whether it was that of the father or that of the mother), and this became a variable that we called "family educational capital." As has been demonstrated by a number of studies, parental education has a significant predictive value in terms of students' academic outcomes and expectations (Organisation for Economic Co-operation and Development, 2007). This is also valid for the case of Spain (Mari-Klose et al., 2009; Subirats et al., 2009), where around 15% of

the variance in PISA 2006 scores is attributable to variables of parental education (at an individual level) (Ministerio de Educacion y Ciencia, 2007).

As specific categories of this variable, we will account for the two following cases: no education or incomplete primary education and postcompulsory education. We will be making occasional references to a subcategory within families with postcompulsory education in order to analyze the distribution of pupils whose parents have a higher educational capital; that is, families in which at least one parent has university qualifications.

For the analysis of the social composition (by level of parental education) of the catchment residential areas, we used data from the population censuses of the different municipalities. For each school zone, we aggregated data on the level of education of the population aged between 25 and 40 years, which tends to be the age group most likely to include mothers and fathers of P3 pupils.[3] The distribution of this data could then be related to the distribution of the levels of parental education of pupils attending the different schools within each area.

Main Results

School segregation and school polarization: An overview

In general terms, the data collected from the 10 municipalities indicate major levels of school segregation when we focus on the distribution of pupils whose parents have no education or incomplete primary education. For the case of school segregation of pupils from families with postcompulsory education, we split the group in order to account for students whose families have university qualifications. By doing so, we can observe that in most municipalities the level of school segregation is slightly higher when we look at this highly qualified group (see Table 1).

In addition, one can observe that in the majority of municipalities the level of segregation between sectors or types of school (public and private dependent) is significantly lower than the level of segregation within each type of school (see Table 2). This seems to indicate that the diversification of the school supply, in terms of type of stakeholder, is not the only factor associated with segregation.

If we compare the polarization data from the schools that concentrate the highest proportion of pupils from families with postcompulsory education (overcapitalized schools) and the data from the schools that concentrate the smallest proportion of them (undercapitalized schools), we can see that in most municipalities the level of concentration among the first (overconcentration index) tends to appear higher than the underconcentration levels among undercapitalized schools (underconcentration index) (see Table 3).[4]

TABLE 1 Local School Dissimilarity Indexes Accounting for Pupils' Family Educational Capital, by Model of School Zoning

	Family educational capital		
Municipality	No education or incomplete primary education	Postcompulsory education (including university education)	University education (only)
Single zone			
Municipality G	0.28	0.35	0.69
Municipality H	0.20	0.29	0.36
Municipality I	0.33	0.22	0.26
Municipality F (P3)	0.34	0.36	0.18
School area			
Municipality C (P5)	0.58	0.39	0.36
Municipality D	0.51	0.21	0.15
Municipality E	0.53	0.24	0.30
Municipality F (P5)	0.34	0.38	0.54
Municipality J	0.62	0.41	0.24
Multiple zones			
Municipality A	0.66	0.47	0.55
Municipality B	0.47	0.40	0.46
Municipality C (P3)	0.64	0.31	0.34

TABLE 2 Local School Dissimilarity Indexes Between Types of School (Public and Private) and Within the Public Sector

	Postcompulsory education		
Municipality	All schools	Between sectors	Within public sector
Single zone			
Municipality G	0.35	0.03	0.39
Municipality H	0.29	0.19	0.20
Municipality I	0.22	0.14	0.26
Municipality F (P3)	0.36	0.17	0.30
School area			
Municipality C (P5)	0.39	0.15	0.36
Municipality D	0.21	0.05	0.23
Municipality E	0.24	—	0.24
Municipality F (P5)	0.38	0.02	0.41
Municipality J	0.41	0.38	0.36
Multiple zones			
Municipality A	0.47	0.23	0.39
Municipality B	0.40	0.24	0.32
Municipality C (P3)	0.31	0.14	0.35

Note: No measure of between-sector segregation is included for Municipality E as there are no private schools in it.

TABLE 3 Local School Polarization Indexes Accounting for Pupils from Families with Postcompulsory Education, by Model of School Zoning

Municipality	"Overcapitalized" schools (OC index)	"Undercapitalized" schools (UC index)
Single zone		
Municipality G	0.4	–0.7
Municipality H	1	–0.3
Municipality I	0.37	–0.45
Municipality F (P3)	0.56	–0.36
School area		
Municipality C (P5)	0.76	–0.58
Municipality D	0.4	–0.32
Municipality E	0.33	–0.22
Municipality F (P5)	0.65	–0.38
Municipality J	0.55	–0.61
Multiple zones		
Municipality A	0.77	–0.77
Municipality B	0.65	–0.56
Municipality C (P3)	0.63	–0.53

Models of school zoning and school segregation

When accounting for the case of families with no education or incomplete primary education, it is the municipalities with the lowest dissimilarity indexes that base their zoning on a single zone model (Table 1): Municipality G, Municipality I, and Municipality H. Certainly, aside from the school zoning model, it is worth remembering that these three municipalities have fewer than 20,000 inhabitants each. However, their dissimilarity measures are considerably lower than that of Municipality J (with 14,000 inhabitants), where a school area model is implemented.

If we look at the case of families with postcompulsory education, the differences in local levels of school segregation seem to be less associated with the zoning models. Once again, the municipalities with single zone models are among those showing lower dissimilarity indexes, although in this case, other municipalities with different zoning models are situated on the same level of school segregation. In fact, among the three municipalities with the lowest indexes we find Municipalities E and D, both of which apply a school area zoning model.

When comparing the levels of segregation according to the school zoning model of each municipality, one important factor to be considered is the level of residential segregation. Figure 1 displays the school and residential dissimilarity indexes with regard to the case of pupils from families with no education or incomplete primary education.

We observe that in the municipalities that utilize a single zone model, the difference between residential segregation and school segregation is

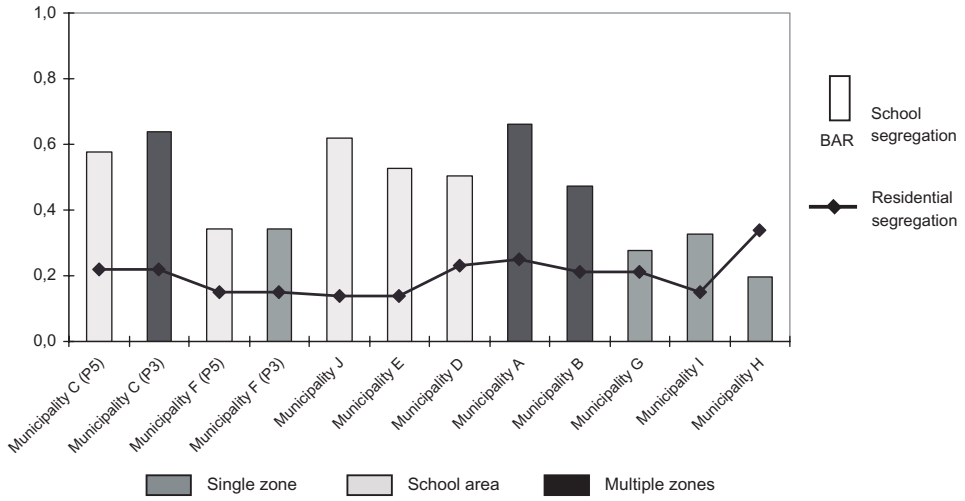

FIGURE 1 School and residential dissimilarity indexes (population with no education or incomplete primary education) by model of school zoning.

smaller. Conversely, both in municipalities with a school area model and those with multiple zones, school segregation tends to be considerably greater than residential segregation.

In relation to the levels of school segregation of pupils from highly educated families (postcompulsory education), the differences between the zoning models are less important (see Figure 2). The municipalities with a single zone model are situated among those with a smaller gap between residential and school segregation, although here we also find Municipalities E and D (school area) and Municipality C for P3 (multiple zones). As occurred in Figure 1, Municipality J, with a school area zoning model, is the one with the greatest difference between the two levels of segregation.

Models of school zoning and school polarization

In reality, school polarization and school segregation are not always associated. There are municipalities with high levels of polarization that present low levels of school segregation, or vice versa. For example, when we consider the case of families with postcompulsory education, in municipalities operating a single zone model, the overconcentration indexes (that is, in overcapitalized schools) are among the lowest,[5] while their levels of underconcentration (in undercapitalized schools) range from the second lowest to the second highest (Table 3). Therefore, in single zone municipalities that generally show low levels of segregation, certain problems concerning

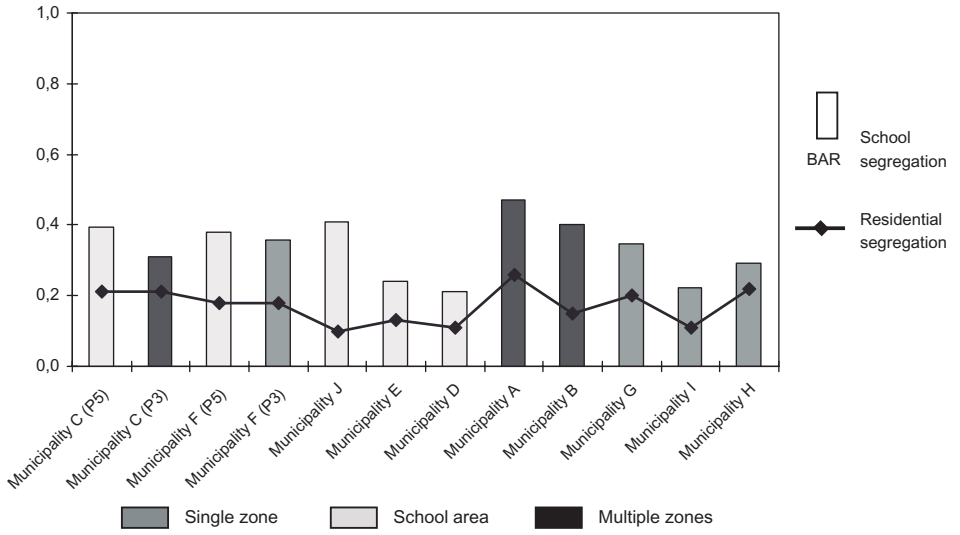

FIGURE 2 School and residential dissimilarity indexes (population with postcompulsory education) by model of school zoning.

social school polarization seem to arise. Considering the greater visibility of school polarization situations, the fact that some single zone municipalities present high levels of school polarization could overshadow the positive effects such a model has on the structural situation as a whole (i.e., on school segregation).

Reforming school zoning

As shown, in the case of Municipality C there was recently a shift from a school area zoning model to a multiple zones model (where private dependent schools are included), while in Municipality F the move was from a school area to single zone model. Table 4 presents the school polarization and dissimilarity indexes for both municipalities, for the cases of P3 pupils (that started school when the new zoning model came into effect) and P5 pupils (that started school under the old zoning model).

As regards school segregation, in Municipality C the dissimilarity index of the pupils from families with postcompulsory education falls by almost a tenth, while in Municipality F the dissimilarity index of the group of students from families with university qualifications falls by three-tenths. Therefore, broadening the margin of school choice to more than one public school appears to be associated with an important redistribution of pupils from families with high educational capital.

TABLE 4 School Polarization and Dissimilarity Indexes in the Municipalities that have Reformed their School Zoning Model

		Municipality C			Municipality F		
Indexes		P5	P3	Differential	P5	P3	Differential
Dissimilarity index	No education or incomplete primary education	0.58	0.64	0.06	0.34	0.34	0
	Postcompulsory education (including university education)	0.39	0.31	−0.08	0.38	0.36	−0.02
	University education (only)	0.36	0.34	−0.02	0.54	0.18	−0.36
Index of overconcentration	"Overcapitalized" schools	0.76	0.63	−0.13	0.65	0.56	−0.09
Index of underconcentration	"Undercapitalized" schools	−0.58	−0.53	−0.05	−0.38	−0.36	−0.02

Risking overinterpretation, this might be explained by the fact that the new models adopted tend to reduce the saliency of middle-class families' flight strategies toward private dependent schools. In the new scenario, they are able to opt for different public schools in the municipality if they do not want to enroll their children at the public school that would correspond to them under the school area model. In fact, in both municipalities, the percentage of pupils from families with university qualifications at public schools increased, while the proportion of these students at publicly funded private schools decreased.

However, neither of these reforms is associated with a reduction of the level of school segregation in the case of pupils from families with no education or incomplete primary education. In Municipality C the dissimilarity index increased slightly, and in Municipality F it stayed the same. It appears that an extension of catchment areas in one municipality and the implementation of a single zone model in the other did not lead to relevant shifts in the choice strategies employed by families with a lower level of education. Moreover, the assignment of the same catchment area to public and private dependent schools did not go hand in hand with increased enrollment of students from these families at publicly funded private schools, but, quite the reverse: it was related to a slight increase in the concentration of pupils from these families at public schools where they were already concentrated.

As concerns school polarization, an observable redistribution of pupils is produced at overcapitalized schools (overconcentration index). In the

case of undercapitalized schools, the level of underconcentration is only slightly lower.

In sum, a general look at the indexes in Table 4, both those for segregation and those for polarization, suggests that in both municipalities there were certain improvements. In Municipality C, of the five indexes under consideration, only one increased slightly, while the others decreased. In Municipality F, four indexes fell and one stayed the same. In general terms, both municipalities experienced a reduction in their levels of school segregation and polarization, the main benefits being in the distribution of pupils from families with postcompulsory education. However, reforms did nothing to reduce the uneven distribution of students from families with no education or incomplete primary education.

"Escaping" the assigned school

In order to assess the saliency and nature of processes of "escaping" the nearby public school (where families choose a school other than the one that would correspond to them according to where they live), a complementary analysis has been carried out. It consists of comparing the location of the school parents choose—and thus the catchment area of that school—with their area of residence.

As expected, in general terms, in school area models the proportion of parents not choosing their assigned public school is higher than in municipalities operating multiple zone models.[6] Inversely, multiple zone models seem to favor a greater adjustment between school places available in a given zone and school choices made by families living in their catchment area (Figure 3).

With regard to families' educational capital, results show that in comparison with less educated families, it is the more educated parents who are more likely to choose a school outside their area of residence. It is also worth looking at the specific "flight" strategies families actually adopt to escape their nearby school; for example, whether these strategies are developed within the public school sector or whether families choose a private dependent school.

As mentioned before, although private dependent schools are not allowed to charge students tuition fees, the practice of charging families for students' extracurricular activities is widespread among these schools. Moreover, some informal practices during the period of preregistration have also been reported, for instance when informing parents about available places or when communicating the applications received during this process to the local authorities. Through these informal practices, some private dependent schools operate a process of cream-skimming, the extent of which is difficult to quantify (Bonal et al., 2005). This may explain why the percentages

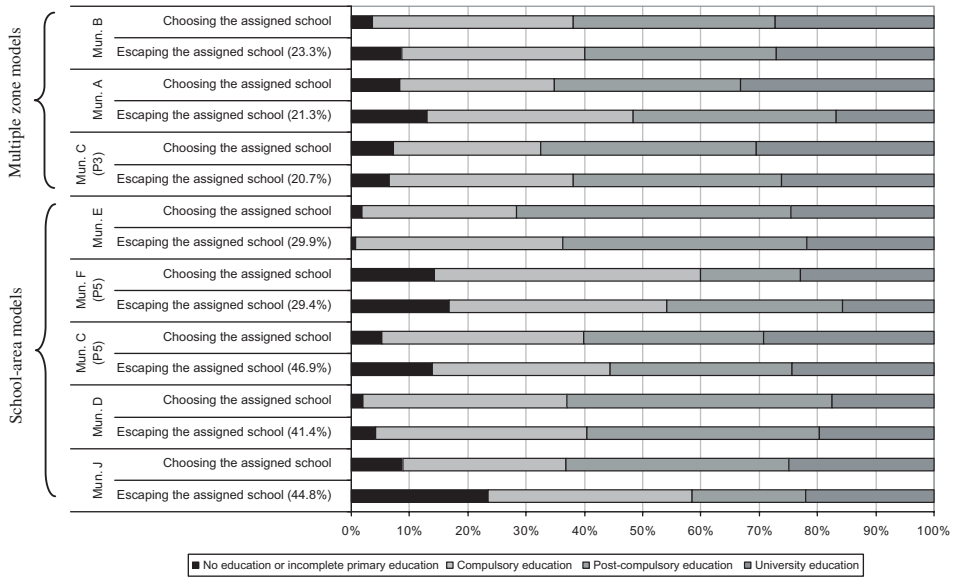

FIGURE 3 Strategies of school choice accounting for pupils' family educational capital.

of socioeconomically disadvantaged students enrolled in these schools are higher than in their catchment area and also why families (above all, middle-class families) may see these schools as a form of "social enclosure" (Ball, 2003).

As shown in Figure 4, parents with high educational capital appear to be overrepresented among families who try to escape their assigned public school by choosing a private dependent school. By contrast, among those who choose a public school other than the one located in their area of residence, the weighting of the different groups of educational capital is more balanced. In fact, in a small number of municipalities (A, F, and J), highly educated parents are clearly underrepresented among families who do not move beyond the public school sector when choosing a school that is not located in their zone of residence.

DISCUSSION AND CONCLUSION

There can be no doubt that student body socioeconomic diversity is associated with several factors that are not related to the school zoning model; for instance, the effect of residential segregation itself, the number and profile of the private schools in the municipalities, and the family strategies and reasons for school choice. These three factors (among others that may or may not be specific to each local authority) play a large role in conditioning

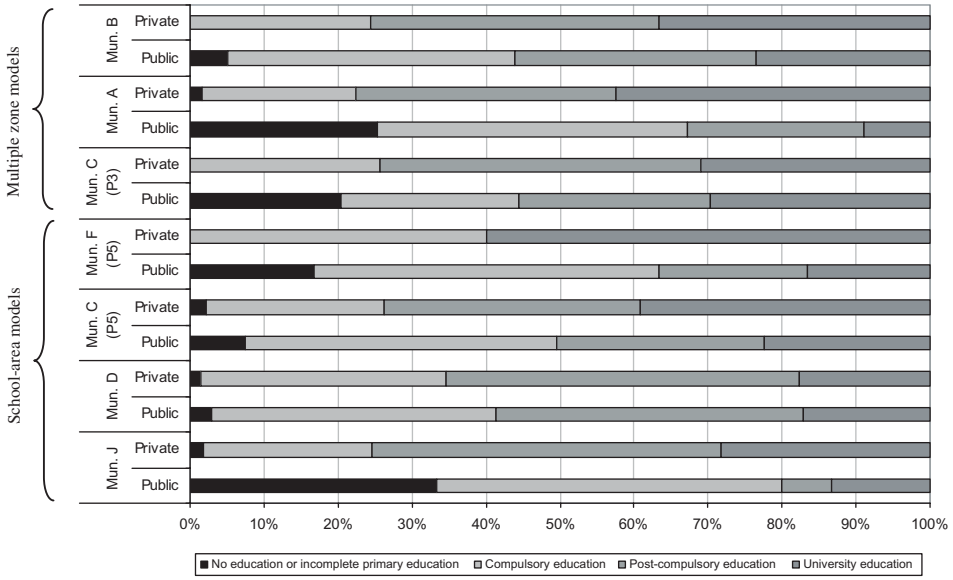

FIGURE 4 Strategies of public and private school choice accounting for pupils' family educational capital.
Note: Municipality E is not included in this Figure as there are no private schools in it.

the social composition of schools in different municipalities while at the same time having the potential to minimize the possible impacts of zoning policies. Despite this, and despite the aforementioned limitations of the sample, the results of our study suggests that some school zoning schemes are less segregating than others.

With regard to school segregation, we have observed how the children of parents with no education or incomplete primary education appear to be less segregated in municipalities that base their zoning on a single zone model. In contrast, the segregation of pupils with highly educated parents seems to be less associated with the zoning models. In the case of those municipalities where the zoning scheme was reformed in order to widen school choice, some positive results seem to arise. This is particularly relevant in the cases of school segregation that becomes less visible and more specifically in the case of the distribution of pupils coming from highly educated families (postcompulsory or university education).

However, those positive correlations do not systematically occur when looking at the segregation index for the overall distribution of pupils from less educated families. It seems that for those families, more open zoning schemes are not sufficient. Subjective reasons for passive or active school choices are multiple and diverse. As concluded by a qualitative research

carried out in Catalonia, Spain (Benito & Gonzàlez, 2007), low socioeconomic status families tend to prioritize the proximity and cost-free status of the school while families of a higher socioeconomic status prioritize the school's social and ethnic composition together with the characteristics of the school's educational project. Based on those premises, it appears that the expansion of attendance zones produces an unintended effect that reinforces the attachment of families of a low socioeconomic status to their neighborhood and immediate community, whose boundaries tend to be even more restricted than the boundaries school area zoning models normally delineate.

We have described how families who choose a school outside of their area of residence tend to have higher qualifications than those who choose their nearby school. Most of the more educated parents who try to escape their assigned public school opt to enroll their children in a private dependent school. This is particularly true under models of less choice. This finding is in line with other studies that show a tendency for wealthier families to escape their local public school and to opt either for private schools or for non-neighborhood public schools (in the United States, magnet and charter schools; Garcia, 2008; Gorard et al., 2003)—a movement that appears to be particularly salient in school districts with high poverty and high rates of students of an ethnic minority (Saporito, 2003; Saporito & Sohoni, 2007).

Regardless, under more open choice models, which generally show low levels of segregation, certain problems concerning school polarization emerge. This is particularly valid when accounting for the distribution of pupils with highly educated families across undercapitalized schools. At the same time, however, municipalities that widened their zoning models witnessed a decrease in their levels of polarization, both among overcapitalized schools and undercapitalized schools.

As indicated throughout the article, school segregation and school polarization are not always associated, in the sense that they capture different processes: segregation deals with general patterns of pupil distribution across schools, while polarization focuses on the distribution of pupils within the two opposite edges of the school map. When we move on to the policy debate, this means that the greater visibility of school polarization situations should not lead us to lose sight of the positive effects that specific zoning models can have on the overall level of diversity within schools. On the one hand, under extended zoning models, relevant dynamics of school segregation tend to be neutralized. On the other hand, under these circumstances, the maintenance of or slight increase in certain situations of concentration is associated with the presence of more extreme and marginal school realities. Therefore, we would be moving from a problem that transversally affects all schools to a focalized problem affecting fewer schools.

NOTES

1. Indeed, studies carried out within the school effectiveness paradigm emphasize that schools "can make a difference" (beyond their social composition) if they base their everyday work on the development of certain pedagogic and organizational processes (Reynolds et al., 2002; Teddlie & Reynolds, 2000), such as a climate of consensus, cohesion, and cooperation among the teaching staff; the existence of an "orderly atmosphere" at the school; or the orientation of teaching practice toward academic success (Scheerens & Bosker, 1997).

2. For confidentiality purposes, we have not used the names of the municipalities. Throughout the text, we refer to them using a letter (for example, Municipality A).

3. Given that the size of the population aged between 25 and 40 years and the number of families with children studying P3 are different, we have applied a standardization procedure to the school variable in relation to the variable from the municipal census.

4. Although several other levels of polarization have been calculated, we will report here the only indexes of overconcentration and underconcentration for pupils from families with postcompulsory education. This exercise will allow us to assess the existing levels of polarization between what we will call overcapitalized and undercapitalized schools. Moreover, this indicator yields the most significant results when it comes to examining the extent to which polarization processes (concerning pupils' instructional background) affect schools in all the municipalities of our sample.

5. With the exception of Municipality H, which has an index of 1 that can be explained by the presence of a preprimary private independent school in the municipality.

6. Single zone models are not included in this discussion (nor in Figures 3 and 4) given that they do not establish school catchment areas within the municipalities where they are applied.

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APPENDIX: BASIC CHARACTERISTICS OF THE MUNICIPALITIES IN THE SAMPLE

Municipality	Inhabitants	Zoning model	N. of schools[1]/ N. of pupils[2] (total)	N. of private schools[1]/ N. of pupils at private schools[2]	% pupils at private schools[2]	Level of education of the population aged between 25 and 40 years		
						No education or incomplete primary education (%)	Postcompulsory education (%)	University education (%)
Mun. A	218,000	Multiple zones	46/2,079	19/989	47.6	58.8	30.6	10.6
Mun. B	116,000	Multiple zones	33/1,220	15/614	50.3	73.1	21.6	8.3
Mun. C	99,000	School-area → Multiple zones	26/2,269	9/807	35.6	68.9	25.3	5.7
Mun. D	68,000	School area	16/690	6/226	32.7	64.6	24	11.4
Mun. E	27,000	School area	5/213	0/0	0	60	30	10.1
Mun. F	20,000	School area → Single zone	5/411	1/52	12.6	70.6	20.9	8.4
Mun. G	19,000	Single zone	5/231	2/100	43.3	59.5	32.9	7.6
Mun. H	16,000	Single zone	5/218	1/25	11.5	60.5	24.2	15.2
Mun. I	15,000	Single zone	6/199	3/96	48.2	61.5	31	7.5
Mun. J	14,000	School area	4/176	2/65	36.9	76.4	15.5	8.1

[1]Number of primary schools (including preprimary stage).
[2]Number of pupils at P3.

3. Discussió dels resultats

Les publicacions A i B han posat l'accent en una de les principals causes de la segregació escolar: les (desiguals) lògiques de tria de les famílies. Tots dos articles deriven d'una mateixa recerca realitzada a la ciutat de Barcelona i tots dos combinen un doble enfocament metodològic: quantitatiu (enquesta) i qualitatiu (entrevistes). Certament, no és fàcil aproximar-se a les lògiques de tria de les famílies en base a tècniques d'investigació quantitatives; en primer lloc, per la manca de dades disponibles i, en segon lloc, per la dificultat d'aquestes tècniques per capturar la complexitat dels discursos i les estratègies elaborades per les famílies. Ara bé, malgrat les seves limitacions, l'administració d'una enquesta ens ha ofert la possibilitat de recollir algunes dades inexistents en el cas català i, a més, fer-ho per a un volum important de famílies. En tot cas, el qüestionari (en el disseny del qual varem tenir un paper central) prioritàriament ha centrat l'atenció en preguntes referents a les pràctiques i a les preferències de les famílies, deixant per a les entrevistes l'aproximació als discursos i a la dimensió més "subjectiva" de la tria escolar.

L'enquesta va ser enviada a totes les famílies de Barcelona amb un fill en edat d'accedir a P3. La taxa de resposta va ser del 23% (3.245 famílies). Per tant, es tracta d'una enquesta autosubministrada. Lògicament, hauria estat òptim disposar de les dades del conjunt de l'univers, o bé d'una mostra significativa seleccionada de forma aleatòria, atès que en una mostra autosubministrada no podem controlar els possibles "biaixos de selecció" que afectin al sector de famílies que sí ha respost el qüestionari. Tot i així, tenint en compte la inexistència de dades referents a la tria d'escola (o, si més no, la manca d'accessibilitat d'aquestes dades per als investigadors), considerem que el volum de respostes obtingudes conforma una massa crítica prou sòlida i esdevé una oportunitat irrenunciable per obtenir noves dades que ens permetin comprendre amb major amplitud els processos de tria escolar. Això sí; no perdent de vista que la mostra autosubministrada no és l'opció més òptima ni la més precisa per treballar amb dades d'enquesta. Paga la pena, però, assumir-ne les limitacions.

Aquesta enquesta, com apuntàvem, no pretenia abastar l'objecte d'estudi en la seva totalitat, sinó oferir-nos algunes dades "objectives" sobre les pràctiques i les preferències de les famílies que, posteriorment, puguin ser contrastades i complementades amb un treball qualitatiu prou sòlid. En aquest sentit, han estat les entrevistes a les famílies les que ens han permès capturar la complexitat del fenomen i interpretar les respostes obtingudes en els qüestionaris. Sens dubte, són les entrevistes les que constitueixen el nucli dur de la nostra anàlisi i, en bona mesura, l'enquesta ha estat una tècnica d'investigació complementària. Ras i curt: l'enquesta sense les entrevistes no hauria tingut sentit. Tot i així, la informació que ens han proporcionat els qüestionaris ha estat especialment valuosa (i, insistim; inèdita): nombre d'escoles visitades, ús dels diferents canals d'informació, coneixement dels criteris de baremació, nivell d'anticipació de la preocupació per la tria, factors prioritaris per triar escola, factors prioritaris per descartar escola, etc. (tot això "creuat" per variables socioeconòmiques clau). Sense anar més lluny, en absència dels qüestionaris no hauríem pogut realitzar el contrast dels rànquings dels factors de tria en "positiu" i en "negatiu".

Sigui com sigui, partint de la noció de *camp* de Pierre Bourdieu (1992), hem pretès aquí "objectivar" alguns dels factors que dibuixen una estructura d'oportunitats desigual en el camp de la tria escolar. Partint d'aquest dibuix, mitjançant el treball de camp qualitatiu, hem indagat en els discursos i les pràctiques de les famílies, tot posant l'accent en les formules d'activació

de capitals (cultural, social i econòmic) per posicionar-se en aquest camp de joc. En aquest sentit, ambdós articles són complementaris. El primer, article A, centra la seva atenció en les "desigualtats objectives" de l'accés escolar, mentre que el segon, article B, focalitza la seva mirada en els discursos i les pràctiques de les famílies (desigualtats "subjectives"). Certament, convé ser prudent amb aquesta distinció, atès que la frontera que separa les desigualtats objectives i les subjectives no és del tot nítida.

Els resultats han posat de manifest unes més que notables desigualtats "objectives" en el camp de la tria escolar. A Catalunya, els processos de preinscripció escolar es fonamenten en una igualtat d'oportunitats formal: les famílies poden triar escola (aquella que desitgin), però les escoles no poden triar les famílies. Això, acompanyat d'uns criteris de desempat objectius de les situacions de sobredemanda, garanteix que, *de iure*, el concurs de les famílies en l'accés escolar es produeixi en igualtat de condicions. Ara bé, les anàlisis aquí presentades posen de manifest que el procés de preinscripció escolar ha esdevingut un dels principals (si no el principal) espais de tensió i conflicte en l'àmbit educatiu. Un conflicte, aquest, que no només està motivat per la voluntat de les famílies d'accedir a les escoles pedagògicament més atractives (o d'una suposada major "qualitat"), sinó per la percepció que la tria d'escola és un moment especialment transcendent en la lluita per la reproducció i la mobilitat socials. Tal és així que les famílies de classe mitjana, en la cerca d'un posicionament en la xarxa escolar que, o bé generi una avantatge competitiva per als seus fills o que, simplement, contingui els factors percebuts com de major risc per a les seves expectatives, activen els capitals disponibles d'una forma especialment intensiva.

En aparença, la tria escolar té lloc en un espai neutral en el qual les famílies, en base a càlculs racionals de costos-beneficis, fonamentats en una posició de mercat informat, trien lliurement l'escola per als seus fills en base a les seves preferències. Unes preferències, aquestes, que pivoten, fonamentalment, sobre el valor educatiu de les escoles. En base a aquesta seqüència, la tria de les famílies és, per se, un mecanisme de millora de l'eficiència del sistema educatiu, atès que tendeix a penalitzar (amb menys demanda) aquelles escoles de menor "qualitat" o amb propostes pedagògiques menys atractives. Aquest raonament, sostingut pels defensors de les lògiques de quasimercat, queda clarament qüestionat pels resultats aquí presentats (en la línia d'altres recerques prèvies referenciades en els dos articles).

En aquest sentit, una de les principals aportacions que considerem especialment rellevant d'aquestes publicacions és l'intent d'"objectivació" de les desigualtats objectives del camp de joc. Certament, bona part d'aquests factors de desigualtat ja han estat explorats prèviament en la literatura acadèmica, però el que aquí hem intentat és copsar la magnitud d'aquestes desigualtats, en funció, principalment, del capital instructiu familiar i, també, de la procedència. Les xifres obtingudes dibuixen un camp de joc on no només les famílies hi accedeixen amb posicions de partida molt desiguals (com a conseqüència de les desiguals possessions de capitals), sinó que les pròpies regles del joc són desigualment conegudes i desigualment interpretades.

Es tracta d'una partida viciada abans de començar a jugar. En aquest sentit s'ha mostrat especialment rellevant el capital cultural de les famílies, com aquell factor que marca la diferència a l'hora de poder interpretar un camp d'extrema complexitat: el sistema de baremació, els "valors afegits" que ofereixen les diferents escoles, els riscos inherents en unes o altres tries, etc. El capital social, certament, també és altament transcendent, atès que

ofereix recursos privilegiats per tal de dominar el camp de joc, especialment pel que fa referència al coneixement directe de l'oferta educativa. El capital econòmic, que aquí hem analitzat menys, podíem dir que juga un paper rellevant a posteriori, en l'articulació de les estratègies, principalment com a mecanisme de fugida d'algunes escoles. Unes barreres econòmiques que, convé recordar, són especialment visibles en el sector concertat, però que també són molt presents en el propi sector públic.

La tipologia elaborada en l'article A, a primera vista, tendeix a simplificar la complexitat de les lògiques de tria, atès que només diferencia tres grups de famílies. Lògicament, aquests grups internament són força heterogenis, però la tipologia es limita a identificar aquelles barreres més significatives en la dimensió "objectiva" del camp, tot posant de manifest que una part significativa de la població (en la nostra mostra, una cinquena part) en queda totalment desplaçada. Algunes famílies manifesten la seva percepció que no es troben en situació d'aspirar a competir en la tria escolar. Reconeixen la partida, però assumeixen la seva exclusió amb resignació. D'altres, en canvi, ni tens sols perceben la tria com un espai competitiu. Trien l'escola "que toca", quedant absolutament al marge dels processos de tria. Fins al punt que, una vegada finalitzat el procés de preinscripció escolar, moltes d'aquestes famílies encara en desconeixen les regles bàsiques que el regulen (com, per exemple, els criteris de baremació).

Les publicacions C, D i E han compartit un mateix propòsit; fer un pas més enllà i analitzar l'impacte agregat de l'efecte composició sobre el resultats acadèmics del conjunt de l'alumnat. O el que és el mateix: analitzar els efectes de la segregació escolar sobre els resultats globals del sistema eductiu. Per tant, assumint la ja contrastada incidència de la composició social de les escoles, el propòsit que han compartit aquestes tres publicacions ha estat fer-ne una anàlisi agregada. Es tracta d'un repte, certament, agosarat. No en va, ha implicat el disseny d'una proposta analítica i metodològica que pugui donar resposta a aital propòsit. No cal dir que no ha estat un camí fàcil. La idea inicial ha implicat un llarg procés d'assaig i error fins assolir l'arquitectura metodològica que aquí presentem. El resultat és altament positiu, atès que aporta noves evidències en relació a l'estudi de l'efecte composició i, alhora, obre noves vies d'investigació.

En dues de les publicacions (C i D), també hem realitzat una anàlisi multinivell (a partir de les dades PISA 2009), però preteníem anar més enllà i explorar quin és el marge de maniobra que ofereix l'efecte composició a les polítiques educatives. Les anàlisis multinivell han posat de manifest una incidència significativa de la composició socioeconòmica de les escoles (ESCS) a tots els països analitzats, amb l'excepció de Finlàndia. Pel que fa a l'anàlisi dels escenaris, si hi ha un resultat contundent en totes tres publicacions, és que una hipotètica reducció de la segregació escolar tindria un impacte positiu en el terreny de l'equitat. Malgrat que aquest era un resultat imaginable, les anàlisis realitzades posen de manifest que es tractaria d'un efecte sistemàtic, que tindria lloc a tots els països analitzats, i que podria assolir intensitats especialment elevades. La pregunta que es deriva d'aquests resultats és si aquest guanys es produeixen a costa de l'"excel·lencia" del sistema (com s'esgrimeix molt sovit) o no. Els resultats obtinguts posen de manifest que una hipotètica reducció de la segregació escolar generaria sistemes educatius significativament més equitatius sense que això impliques grans pèrdues en el terreny de l'"excel·lència". De fet, en alguns sistemes educatius tindria un impacte positiu.

En definitiva, la nostra proposta analítica obre noves vies d'investigació sobre l'*efecte composició* i, en conseqüència, sobre els efectes de la segregació escolar. És necessari, però, posar de manifest les limitacions de les anàlisis que aquí hem presentat. Algunes d'aquestes limitacions són fruit de les pròpies característiques de les bases de dades amb què hem treballat (PISA 2009 i EPC 2008). En condicions ideals, l'anàlisi de l'efecte composició s'hauria de realitzar amb bases de dades que recollissin el rendiment dels alumnes en dos moments temporals diferenciats. D'aquesta forma, seria possible controlar durant un període concret de temps (un curs, per exemple), amb una composició social constant, com han evolucionat les notes dels diferents alumnes. Sense aquest control, és possible que no estiguem afinant bé l'efecte composició. Aquesta metodologia, però, requereix bases de dades *ad hoc*, només existents en alguns països, com ara Bèlgica. Davant la impossibilitat de treballar amb bases de dades específiques hem optat per recórrer a les proves PISA. Al marge que només ens ofereix el rendiment dels alumnes en un moment en el temps, les dades PISA presenten una altra limitació per a les nostres anàlisis: la mostra és representativa a nivell d'alumnes però no a nivell de centres. A cada país o regió, se selecciona una mostra de centres, i a cada centre una mostra d'alumnes de 15 anys. Si bé la mostra d'alumnes és representativa del conjunt de l'alumnat, per tal que la mostra de centres fos representativa, hauria de ser significativament més nombrosa del que és. Això, sens dubte, és un handicap important a l'hora d'analitzar l'impacte de l'efecte composició i de construir escenaris hipotètics. Per tal de contrastar les dades obtingudes amb PISA 2006, varem seleccionar una altre base de dades que teníem al nostre abast (EPC 2008). Aquesta base de dades, si bé també treballava amb una mostra reduïda de centres (similar a la de PISA), tenia la particularitat que recollia les dades de composició social de tot l'alumnat de 4t d'ESO dels centres seleccionats. Aquesta base de dades ens ha permès contrastar els resultats amb les dades PISA, si bé en aquest cas no hem treballat amb proves de competències, sinó amb les notes dels centres. Com ja hem comentat anteriorment, aquí poden haver-hi biaixos pel fet que l'avaluació de les notes no segueixi el mateix criteri a tots els centres i, per tant, ens trobem davant de dades no estandarditzades.

Esmentem, ara sí, algunes limitacions que fan referència directament a la naturalesa de la proposta analítica d'escenaris. La primera limitació, fa referència al possible biaix de selecció de les famílies que accedeixen a unes i altres escoles. Nosaltres classifiquem les escoles en base a característiques objectivables, com ara la mitjana d'ESCS dels centres o el percentatge de famílies universitàries. Ara bé, hi ha un conjunt de característiques no observables que podrien estar condicionant els resultats. Per exemple, les actituds o disposicions de les famílies vers l'escola. Podria succeir que famílies que nosaltres estem considerant amb característiques similars (pel fet de ser universitàries) tinguessin unes expectatives força diferents respecte als resultats educatius dels seus fills i que aquestes famílies es concentressin en unes escoles.

En segon lloc, i força relacionat amb l'anterior, tampoc disposem dels recursos (materials i de personal) de que puguin disposar les escoles, i per tant no controlem el fet que algunes escoles (i, per tant, algun escenari) puguin tenir més recursos que les altres. En aquest sentit, seria possible que l'escenari segregat disposés d'un major volum de recursos que l'escenari desegregat, atès que incorpora tant les escoles socialment més desafavorides, que poden concentrar recursos addicionals, com escoles d'elit que disposen de majors recursos. Aquest aspecte, que no podem controlar perquè no disposem d'aquestes dades, podria estar impactant en els resultats que obtenen ambdós escenaris, ponderant a l'alça els resultats de l'escenari segregat.

Per últim, convé fer esment que, al marge de la seva rellevància per a l'anàlisi de les desigualtats educatives, l'efecte composició que aquí hem explorat, també té importants implicacions en el terreny de l'avaluació de la tasca realitzada pels centres. En la mesura que els resultats dels seus alumnes depenen tant de variables individuals i familiars com del perfil del conjunt d'alumnes que s'escolaritzen al centre, l'avaluació del "valor afegit" de la tasca realitzada per l'escola ha de tenir en consideració quina és la seva composició social. Si aquesta variable de centre no es té en compte i tan sols es controlen els resultats per l'origen social de l'alumnat, es corre el risc d'acabar sobredimensionant o infravalorant la tasca dels centres tot adjudicant-li uns efectes sobre els resultats que no són fruït d'aquesta tasca, sinó d'una variable exògena al propi centre. Aquest debat ha tingut una força especial al Regne Unit, on diferents investigadors han criticat fortament la publicació de rànquings dels resultats de les escoles essent controlats només per variables de caràcter individual.

4. Conclusions

Aquesta tesi, com no podia ser d'altra forma, ha ofert una mirada parcial a l'edificació de les desigualtats educatives. Des de la perspectiva sociològica, hem posat l'accent en (una part de) la dimensió més estructural del camp educatiu, aquella que fa referència a les característiques socioeconòmiques de l'alumnat. Conscientment, hem deixat de banda la dimensió pedagògica dels processos educatius. Però això no implica que en neguem la seva influència ni, tampoc, la seva rellevància. Allò que hem pretès, en tant que sociòlegs, és explorar el marge de maniobra de que disposa la política educativa per tal de reduir les desigualtats educatives mitjançant polítiques de lluita contra la segregació escolar.

Una hipotètica xarxa escolar sense segregació, on totes les escoles fossin socialment heterogènies, generaria unes condicions objectives iguals per a tots els centres, fet que, segurament, permetria maximitzar el potencial pedagògic del sistema. Certament, aquesta situació idíl·lica no és realista, però existeix un gran marge de millora per recórrer. I es tracta d'un marge de millora que, en alguns casos, no requereix de grans inversions materials, sinó simplement d'apostes decidides per polítiques públiques i marcs normatius que reverteixin les dinàmiques de segregació escolar (en molts casos, a cost zero). No neguem aquí la capacitat transformadora de l'escola. Aquí hem analitzat alguns dels factors estructurals que originen les desigualtats educatives i, alhora, hem explorat els marges de maniobra de que disposen les polítiques educatives.

La lluita contra la segregació escolar és una de les vies possibles de lluita contra les desigualtats educatives, però no és l'única via possible. Alguns autors han relativitzat els beneficis d'aquestes polítiques adduint les dificultats inherents a la reversió de les dinàmiques de segregació escolar i la major eficàcia de determinades intervencions focalitzades en contextos escolars menys capitalitzats. El problema és que, més enllà de les (relativament poques) realitats escolars "guetitzades", s'amaguen uns importants nivells de segregació estructural. No ens situem, doncs, davant d'una problemàtica que afecti a una minoria d'escoles, sinó davant d'una problemàtica relacionada amb la distribució de l'alumnat en el conjunt de la xarxa escolar.

En un altre lloc (Benito i Gonzàlez, 2010) hem defensat que la neutralització dels efectes negatius de la segregació escolar sobre els resultats educatius no pot abordar-se exclusivament en base a polítiques focalitzades, atès que implicarien un increment poc viable de la inversió de recursos. En canvi, en base als resultats aquí presentats, l'impuls de polítiques universalistes –que, com apuntàvem, no implicarien un increment significatiu de la inversió pública- orientades a la reducció dels nivells de segregació en el conjunt de la xarxa escolar, podria generar uns efectes positius globals difícilment assolibles mitjançant la focalització de recursos en algunes escoles.

Lògicament, les polítiques de lluita contra la segregació escolar tenen limitacions importants, atenent, entre d'altres qüestions, als nivells de segregació residencials d'alguns municipis. En aquest casos, caldria aplicar actuacions focalitzades per mirar de fer front als seus impactes negatius, però el marge de maniobra disponible, insistim, és notable. Des d'aquest punt de vista, les actuacions focalitzades haurien d'esdevenir actuacions complementàries a les polítiques de caràcter universalista i no la principal eina de lluita contra els efectes negatius de la segregació escolar.

Són diverses les línies de recerca futures que poden derivar d'aquesta tesi. La primera està relacionada amb la creixent diversificació de l'oferta escolar que està experimentant el nostre mapa escolar. L'avanç del quasi-mercat educatiu en el sistema educatiu català s'ha canalitzat, principalment, a través del desplegament de l'autonomia de centres, que, al seu torn, ha situat en l'epicentre de l'agenda educativa l'impuls dels projectes educatius de centre. En efecte, en els darrers anys, les escoles catalanes (bona part d'elles) han iniciat un procés de reflexió i autoanàlisi amb l'objectiu de redefinir-se i projectar-se cap al futur en base a un projecte pedagògic propi (i singular). En paral·lel a aquest procés (o com a conseqüència d'aquest procés), en els darrers dos o tres anys ha emergit amb força l'"onada" d'innovació pedagògica articulada al voltant del projecte Escola Nova 21.

Aquest procés creixent de diferenciació pedagògica entre les escoles afegeix nous elements de tensió al camp de la tria escolar. Per una banda, les escoles busquen diferenciar-se, mentre que les famílies competeixen entre elles per cercar i assegurar-se l'accés a aquells factors diferenciadors que puguin tenir un valor afegit. Aquests elements ja eren presents en el moment de realització del treball de camp de les recerques de les quals deriva aquesta tesi, però no tenien la magnitud actual. Així doncs, en base a aquest nou escenari, i en base a les evidències que ha aportat aquesta tesi (sobre els riscos en el terreny de les desigualtats educatives), ens plantegem els següents possibles projectes (o subprojectes) de recerca.

En primer lloc, un projecte d'anàlisi de les jornades de portes obertes de les escoles. Amb la idea de copsar la diversitat de projectes de centre i de models pedagògics, aquí l'objectiu seria analitzar els discursos que articulen les escoles en les jornades de portes obertes. Això ens permetria copsar a quin és el model que ofereixen, com s'articula discursivament, quin són els aspectes diferenciadors que emfatitzen els centres davant de les famílies, fins a quin punt són operen amb una lògica competitiva amb les altre escoles, etc. Aquests són alguns dels aspectes que centrarien un projecte d'aquesta mena. De fet, aquest és un projecte que ja hem començat a engegar i que voldríem completar en un futur recent. L'objectiu últim és identificar quins són els diferents models "identitaris" d'escola que s'estan desplegant a casa nostra i quins d'ells esdevenen nínxols educatius, atès que apel·len a un o altre sector de famílies.

Vinculat amb aquest darrer aspecte, un altre projecte que podria donar continuïtat a aquesta tesi seria una anàlisi dels impactes que està generant l'aposta per la innovació educativa d'alguns centres sobre la demanda de places. En alguns municipis i en alguns barris de Barcelona, les escoles que estan abanderant el procés de canvi cap a la innovació educativa comencen a atraure un sector de població cada vegada més interessat en accedir a projectes d'escola singulars o que, simplement, són percebuts com a centres que funcionen amb metodologies "avançades". En la línia d'aprofundir en els nínxols educatius que s'estan configurant a casa nostra, aquest projecte analitzaria, per una banda, l'aposta d'uns centres per metodologies innovadores està reconfigurant el mapa de l'accés escolar, en la mesura que són escoles que comencen a concentrar una forta sobredemanda, com a conseqüència de l'atracció d'un perfil concret de famílies. Per tant, aquest projecte exploraria els primers efectes que està tenint sobre la segregació escolar, així com els seus efectes potencials a mitjà i llarg termini.

Una tercer projecte que es desprèn de les publicacions sobre la tria d'escola, estaria relacionat amb els estils de socialització familiar. El camp de la tria escolar, com hem vist, és viscut amb

certa pressió per part d'algunes famílies, que no volen errar el tret en una decisió que perceben com a especialment transcendent. Davant d'aquesta incertesa, una part de les famílies reaccionen activant els seus capitals (cultural, social i econòmic) per minimitzar els riscos percebuts. Aquesta pressió, però, transcendeix la tria escolar i està molt vinculada amb allò que en una de les publicacions (A) hem anomenat la "paradoxa del control familiar".

Es produeix la situació paradoxal que, molt sovint, aquelles famílies que més es preocupen per la tria d'escola són aquelles que menys tenen a "perdre" (en termes de posicionaments social), atès que són famílies amb un capital cultural elevat. Tot i així, aquestes famílies cerquen una escola que els ofereixi garanties i, en paral·lel, més enllà de l'escola, activen tot un seguit d'estratègies per dotar els seus fills d'aquells recursos i aquelles competències que els permetin tenir una trajectòria educativa exitosa, o si més no, una trajectòria sense ensurts. Aquí juguen un paper central les activitats extraescolars, especialment aquelles que doten els infants de capital cultural i que tenen un alt valor (instrumental i/o expressiu) a l'escola. Aquesta "pressió" per preparar els fills per a un espai escolar altament competitiu, ja des dels seus inicis, està generant en els darrers anys un gran creixement de les activitats, bé formal, bé informals, relacionades amb l'estimulació precoç dels infants. Des de joguines, llibres, DVDs, activitats culturals per a nadons, extraescolars en edat d'infantil, etc., són múltiples els recursos que han passat a integrar-se en els espais de socialització d'algunes famílies.

En aquest sentit, pensem que seria altament interessant analitzar com, en els darrers anys, s'han anat reconfigurant alguns dels estils de socialització familiar, especialment entre la classe mitjana, en relació als mecanismes de transmissió del capital cultural. Entre algunes famílies, l'èxit escolar preocupa des del naixement de l'infant. O més ben dit, des del naixement de l'infant cal començar a estimular-lo per a l'èxit escolar. L'anàlisi de l'edificació de les desigualtats educatives hauria de parar atenció a aquestes lògiques de socialització familiar, que estan directament vinculades amb les pors i les expectatives que les famílies tenen sobre el desenvolupament escolar dels seus fills.

En relació a l'efecte composició, la proposta analítica d'escenaris hipotètics (segregat i desegregat) obre, clarament, noves vies de recerca. En aquest sentit, com a treball complementari al que aquí s'ha presentat, ens plantegem aplicar aquest exercici de simulació a les expectatives dels alumnes, per tal de comparar els resultats relatius al rendiment acadèmic. La hipòtesi que motiva aquesta anàlisi és que l'heterogeneïtat social a les aules genera un major "efecte arrossegament" en relació a les expectatives acadèmiques que el que produeix sobre els resultats. És a dir, que entre els alumnes amb un menor capital instructiu familiar, la incidència del fet de compartir aula amb alumnes més capitalitzats es tradueix, sobretot, en un arrossegament a l'alça de les expectatives acadèmiques. En un eixamplament dels seus horitzons formatius, atès que passen a normalitzar-se en el seu imaginari col·lectiu trajectòries acadèmiques que poc presents en el seu entorn social més proper. Al mateix, l'arrossegament a la baixa entre els alumnes més capitalitzats tendiria a ser inferior, atès que els seus horitzons formatius són menys permeables que el seu rendiment. Per tant, en relació a les expectatives acadèmiques es produiria un efecte composició més asimètric que en relació al rendiment. És una hipòtesi que, lògicament, caldrà contrastar. L'eina metodològica que aquí hem desenvolupat sembla idònia per escometre aquest propòsit.

Per altra banda, de forma complementària, també ens plantegem aprofundir en els mecanismes causals de l'efecte composició mitjançant la realització de treball etnogràfic.

Aquest tipus d'aproximació permetria indagar quins són els (micro)processos relacionals que afavoreixen un major "arrossegament" a l'alça del rendiment i/o de les expectatives dels alumnes amb una posició de partida menys afavorida. En aquest treball etnogràfic s'inclouria l'anàlisi de xarxes socials, tècnica amb la que ja hem experimentat en alguna recerca similar i que podria contribuir a aportar llum al voltant de les condicions estructurals i relacionals dels centres que poden afavorir aquest arrossegament. Aquesta anàlisi de xarxes socials seria necessari complementar-la amb treball etnogràfic. Al marge de generar coneixement sobre els mecanismes causals de l'efecte composició, un projecte d'aquesta mena permetria analitzar quines són aquelles polítiques organitzatives de centre que en poden maximitzar el seu potencial com a factor afavoridor de la igualtat d'oportunitats educatives. Aquestes dos projectes de recerca permetrien complementar els treballs aquí presentats en relació a l'efecte composició.

En definitiva, els resultats obtinguts en aquesta tesi motiven tota una agenda de recerca que pretén estirar alguns dels fils que aquí s'han apuntat, o bé omplir alguns buits que aquí no han pogut ser treballats. Certament, es tracta d'una agenda de recerca ambiciosa, però altament atractiva per donar continuïtat a una tesi que ha pretès contribuir, des de la sociologia, a la comprensió de l'edificació de les desigualtats educatives i a l'exploració del marge de millora de que disposen les polítiques educatives per fer-hi front.

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